



#5

## SEQUENCE LISTING

&lt;110&gt; Grosse et al

&lt;120&gt; Novel Proteins and Nucleic Acids Encoding Same

&lt;130&gt; 21402-157

&lt;140&gt; 09/976,782

&lt;141&gt; 2001-10-12

&lt;150&gt; 60/240,113

&lt;151&gt; 2000-10-12

&lt;150&gt; 60/240,662

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/240,732

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/240,625

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/240,703

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/241,190

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/240,637

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/240,669

&lt;151&gt; 2000-10-16

&lt;150&gt; 60/262,455

&lt;151&gt; 2001-01-18

&lt;150&gt; 60/240,648

&lt;151&gt; 2000-10-16

&lt;160&gt; 127

&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 1345

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1

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 <213> Homo sapiens

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      35             40             45

Leu Leu Asp Glu Ala Gly Gly Ala Val Ala Gln Gly Tyr Val Pro His
      50             55             60

Asn Tyr Leu Ala Glu Arg Glu Thr Val Glu Ser Glu Pro Trp Phe Phe
      65             70             75             80

Gly Cys Ile Ser Arg Ser Glu Ala Val Arg Arg Leu Gln Ala Glu Gly
      85             90             95

Asn Ala Thr Gly Ala Phe Leu Ile Arg Val Ser Glu Lys Pro Ser Ala
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Asp Tyr Val Leu Ser Val Arg Asp Thr Gln Ala Val Arg His Tyr Lys
      115            120            125

Ile Trp Arg Arg Ala Gly Gly Arg Leu His Leu Asn Glu Ala Val Ser
      130            135            140

Phe Leu Ser Leu Pro Glu Leu Val Asn Tyr His Arg Ala Gln Ser Leu
      145            150            155            160

Ser His Gly Leu Arg Leu Ala Ala Pro Cys Arg Lys His Glu Pro Glu
      165            170            175

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Pro Leu Pro His Trp Asp Asp Trp Glu Arg Pro Arg Glu Glu Phe Thr  
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 Leu Cys Arg Lys Leu Gly Ser Gly Tyr Phe Gly Glu Val Phe Glu Gly  
 195 200 205  
 Leu Trp Lys Asp Arg Val Gln Val Ala Ile Lys Val Ile Ser Arg Asp  
 210 215 220  
 Asn Leu Leu His Gln Gln Met Leu Gln Ser Glu Ile Gln Ala Met Lys  
 225 230 235 240  
 Lys Leu Arg His Lys His Ile Leu Ala Leu Tyr Ala Val Val Ser Val  
 245 250 255  
 Gly Asp Pro Val Tyr Ile Ile Thr Glu Leu Met Ala Lys Gly Ser Leu  
 260 265 270  
 Leu Glu Leu Leu Arg Asp Ser Asp Glu Lys Val Leu Pro Val Ser Glu  
 275 280 285  
 Leu Leu Asp Ile Ala Trp Gln Val Ala Glu Gly Met Cys Tyr Leu Glu  
 290 295 300  
 Ser Gln Asn Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val  
 305 310 315 320  
 Gly Glu Asn Thr Leu Cys Lys Val Gly Asp Phe Gly Leu Ala Arg Leu  
 325 330 335  
 Ile Lys Trp Thr Ala Pro Glu Ala Leu Ser Arg Gly His Tyr Ser Thr  
 340 345 350  
 Lys Ser Asp Val Trp Ser Phe Gly Ile Leu Leu His Glu Met Phe Ser  
 355 360 365  
 Arg Gly Gln Val Pro Tyr Pro Gly Met Ser Asn His Glu Ala Phe Leu  
 370 375 380  
 Arg Val Asp Ala Gly Tyr Arg Met Pro Cys Pro Leu Glu Cys Pro Pro  
 385 390 395 400  
 Ser Val His Lys Leu Met Leu Thr Cys Trp Cys Arg Asp Pro Glu Gln  
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<210> 4

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<213> Homo sapiens

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      20             25             30

Val Ser Met Ser Gly Gly Ala Gly Arg Cys Ser Ser Gly Gly Phe Gly
      35             40             45

Ser Arg Ser Leu Tyr Asn Leu Arg Gly Asn Lys Ser Ile Ser Met Ser
      50             55             60

Val Ala Arg Ser Arg Gln Gly Ala Cys Phe Gly Gly Ala Gly Gly Phe
      65             70             75             80

Gly Thr Gly Gly Phe Gly Gly Gly Phe Gly Gly Ser Phe Ser Gly Lys
      85             90             95

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Gly Gly Pro Gly Phe Pro Val Cys Pro Ala Gly Gly Ile Gln Glu Val  
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 Thr Ile Asn Gln Ser Leu Leu Thr Pro Leu His Val Glu Ile Asp Pro  
 115 120 125  
 Glu Ile Gln Lys Val Arg Thr Glu Glu Arg Glu Gln Ile Lys Leu Leu  
 130 135 140  
 Asn Asn Lys Phe Ala Ser Phe Ile Glu Gln Val Arg Phe Leu Glu Gln  
 145 150 155 160  
 Gln Asn Lys Val Leu Glu Thr Lys Trp Ala Leu Leu Gln Glu Gln Gly  
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 Gln Asn Leu Gly Val Thr Arg Asn Asn Leu Glu Pro Leu Phe Glu Ala  
 180 185 190  
 Tyr Leu Gly Ser Met Arg Ser Thr Leu Asp Arg Leu Gln Ser Glu Arg  
 195 200 205  
 Gly Arg Leu Asp Ser Glu Leu Arg Asn Val Gln Asp Leu Val Glu Asp  
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 Phe Lys Asn Lys Tyr Glu Glu Glu Ile Asn Lys Arg Thr Ala Ala Glu  
 225 230 235 240  
 Asn Asp Phe Val Val Leu Lys Lys Tyr Glu Thr Glu Leu Ala Met Arg  
 245 250 255  
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 260 265 270  
 Thr Asn Ile Thr Arg Leu Gln Leu Glu Thr Glu Ile Glu Ala Leu Lys  
 275 280 285  
 Glu Glu Leu Leu Phe Met Lys Lys Asn His Glu Glu Glu Leu Gly Gln  
 290 295 300  
 Leu Gln Thr Gln Ala Ser Asp Thr Ser Val Val Leu Ser Met Asp Asn  
 305 310 315 320  
 Asn Arg Tyr Leu Asp Phe Ser Ser Ile Ile Thr Glu Val Arg Ala Arg  
 325 330 335  
 Tyr Glu Glu Ile Ala Arg Ser Ser Lys Ala Glu Ala Glu Ala Leu Tyr  
 340 345 350  
 Gln Thr Lys Val Gln Glu Leu Gln Val Ser Ala Gln Leu His Gly Asp  
 355 360 365  
 Arg Met Gln Glu Thr Lys Val Gln Ile Ser Gln Leu His Gln Glu Ile  
 370 375 380  
 Gln Arg Leu Gln Ser Gln Thr Glu Asn Leu Lys Lys Gln Arg Ala Ser  
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Leu Glu Ala Ala Ile Ala Asp Ala Glu Gln Arg Gly Glu Leu Ala Ile  
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 Lys Asp Ala Asn Ala Lys Leu Ser Glu Leu Glu Ala Ala Leu Gln Arg  
 420 425 430  
 Ala Lys Gln Asp Met Ala Arg Gln Leu Arg Glu Tyr Gln Glu Leu Met  
 435 440 445  
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 450 455 460  
 Leu Glu Gly Glu Glu Ser Arg Met Ser Gly Glu Cys Gln Ser Ala Val  
 465 470 475 480  
 Ser Ile Ala Val Val Ser Gly Ser Thr Ser Thr Gly Gly Ile Ser Gly  
 485 490 495  
 Gly Leu Gly Ser Gly Ser Gly Phe Gly Leu Ser Ser Gly Phe Gly Ser  
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 Ser Ser Lys Ile Ile Ser Thr Thr Thr Leu Asn Lys Arg Arg  
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 <213> Homo sapiens

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<212> PRT  
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35 40 45  
Ser Arg Ser Leu Tyr Asn Leu Arg Gly Asn Lys Ser Ile Ser Met Ser  
50 55 60  
Val Ala Arg Ser Arg Gln Gly Ala Cys Phe Gly Gly Ala Gly Gly Phe  
65 70 75 80  
Gly Thr Gly Gly Phe Gly Gly Gly Phe Gly Gly Ser Phe Ser Gly Lys  
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Gly Gly Pro Gly Phe Pro Val Cys Pro Ala Gly Gly Ile Gln Glu Val  
100 105 110  
Thr Ile Asn Gln Ser Leu Leu Thr Pro Leu His Val Glu Ile Asp Pro  
115 120 125  
Glu Ile Gln Lys Val Arg Thr Glu Glu Arg Glu Gln Ile Lys Leu Leu  
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Asn Asn Lys Phe Ala Ser Phe Ile Glu Gln Val Arg Phe Leu Glu Gln  
145 150 155 160  
Gln Asn Lys Val Leu Glu Thr Lys Trp Asn Leu Leu Gln Gln Gln Gly  
165 170 175  
Thr Ser Ser Ile Ser Gly Thr Asn Asn Leu Glu Pro Leu Phe Glu Asn  
180 185 190  
His Ile Asn Tyr Leu Arg Ser Tyr Leu Asp Asn Ile Leu Gly Glu Arg  
195 200 205  
Gly Arg Leu Asp Ser Glu Leu Lys Asn Met Glu Asp Leu Val Glu Asp  
210 215 220  
Phe Lys Lys Lys Tyr Glu Asp Glu Ile Asn Lys Arg Thr Ala Ala Glu  
225 230 235 240

Asn Glu Phe Val Thr Leu Lys Lys Asp Val Asp Ser Ala Tyr Met Asn  
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 Phe Leu Arg Thr Leu Tyr Asp Ala Glu Leu Ser Gln Val Gln Thr His  
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 325 330 335  
 Glu Glu Leu Gln Val Thr Ala Gly Lys His Gly Asp Asn Leu Arg Asp  
 340 345 350  
 Thr Lys Asn Glu Ile Ala Glu Leu Thr Arg Thr Ile Gln Arg Leu Gln  
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 Gly Glu Ala Asp Ala Ala Lys Lys Gln Gln Cys Gln Gln Leu Gln Thr  
 370 375 380  
 Ala Ile Ala Glu Ala Glu Gln Arg Gly Glu Leu Ala Leu Lys Asp Ala  
 385 390 395 400  
 Gln Lys Lys Leu Gly Asp Leu Asp Val Ala Leu His Gln Ala Lys Glu  
 405 410 415  
 Asp Leu Thr Arg Leu Leu Arg Asp Tyr Gln Glu Leu Met Asn Val Lys  
 420 425 430  
 Leu Ala Leu Asp Val Glu Ile Ala Thr Tyr Arg Lys Leu Leu Glu Ser  
 435 440 445  
 Gln Glu Ser Arg Met Ser Gly Glu Cys Gln Ser Ala Val Ser Ile Ala  
 450 455 460  
 Val Val Ser Gly Ser Thr Ser Thr Gly Gly Ile Ser Gly Gly Leu Gly  
 465 470 475 480  
 Ser Gly Ser Gly Phe Gly Leu Ser Ser Gly Phe Gly Ser Gly Ser Gly  
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 <212> DNA  
 <213> Homo sapiens

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<210> 8  
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 <213> Homo sapiens

<400> 8

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          20                               25                               30

Val Ser Met Ser Gly Gly Ala Gly Arg Cys Ser Ser Gly Gly Phe Gly
    35                               40                               45

Ser Arg Ser Leu Tyr Asn Leu Arg Gly Asn Lys Ser Ile Ser Met Ser
    50                               55                               60

Val Ala Arg Ser Arg Gln Gly Ala Cys Phe Gly Gly Ala Gly Gly Phe
    65                               70                               75                               80

Gly Thr Gly Gly Phe Gly Gly Gly Phe Gly Gly Ser Phe Ser Gly Lys
    85                               90                               95

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 130 135 140  
 Asn Asn Lys Phe Ala Ser Phe Ile Glu Gln Val Arg Phe Leu Glu Gln  
 145 150 155 160  
 Gln Asn Lys Val Leu Glu Thr Lys Trp His Leu Leu Gln Gln Gln Gly  
 165 170 175  
 Leu Ser Gly Ser Gln Gln Gly Leu Glu Pro Val Phe Glu Ala Cys Leu  
 180 185 190  
 Asp Gln Leu Arg Lys Gln Leu Glu Gln Leu Gln Gly Glu Arg Gly Ala  
 195 200 205  
 Leu Asp Ala Glu Leu Lys Ala Cys Arg Asp Gln Glu Glu Glu Tyr Lys  
 210 215 220  
 Ser Lys Tyr Glu Asp Glu Ile Asn Lys Arg Thr Glu Met Glu Asn Glu  
 225 230 235 240  
 Phe Val Leu Ile Lys Lys Asp Val Asp Glu Ala Tyr Met Asn Lys Val  
 245 250 255  
 Glu Leu Glu Ser Arg Leu Glu Gly Leu Thr Asp Glu Ile Asn Phe Leu  
 260 265 270  
 Arg Gln Leu Tyr Glu Glu Glu Ile Arg Glu Leu Gln Ser Gln Ile Ser  
 275 280 285  
 Asp Thr Ser Val Val Leu Ser Met Asp Asn Ser Arg Ser Leu Asp Met  
 290 295 300  
 Asp Ser Ile Ile Ala Glu Val Lys Ala Gln Tyr Glu Asp Ile Ala Asn  
 305 310 315 320  
 Arg Ser Arg Ala Glu Ala Glu Ser Met Tyr Gln Ile Lys Tyr Glu Glu  
 325 330 335  
 Leu Gln Ser Leu Ala Gly Lys His Gly Asp Asp Leu Arg Arg Thr Lys  
 340 345 350  
 Thr Glu Ile Ser Glu Met Asn Arg Asn Ile Ser Arg Leu Gln Ala Glu  
 355 360 365  
 Ile Glu Gly Leu Lys Gly Gln Lys Ala Ser Leu Glu Asn Ser Leu Arg  
 370 375 380  
 Glu Val Glu Ala Arg Tyr Ala Leu Gln Met Glu Gln Leu Asn Gly Ile  
 385 390 395 400

Leu Leu His Leu Glu Ser Glu Leu Ala Gln Thr Arg Ala Glu Gly Gln  
 405 410 415  
 Arg Gln Ala Gln Glu Tyr Glu Ala Leu Leu Asn Ile Lys Val Lys Leu  
 420 425 430  
 Glu Ala Glu Ile Ala Thr Tyr Arg Arg Leu Leu Glu Asp Gly Glu Asp  
 435 440 445  
 Phe Lys Met Ser Gly Glu Cys Gln Ser Ala Val Ser Ile Ala Val Val  
 450 455 460  
 Ser Gly Ser Thr Ser Thr Gly Gly Ile Ser Gly Gly Leu Gly Ser Gly  
 465 470 475 480  
 Ser Gly Phe Gly Leu Ser Ser Gly Phe Gly Ser Gly Ser Gly Ser Gly  
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 Ser Thr Thr Thr Leu Asn Lys Arg Arg  
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 <211> 1619  
 <212> DNA  
 <213> Homo sapiens

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 <211> 521  
 <212> PRT  
 <213> Homo sapiens

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             20                    25                    30  
 Val Ser Met Ser Gly Gly Ala Gly Arg Cys Ser Ser Gly Gly Phe Gly  
             35                    40                    45  
 Ser Arg Ser Leu Tyr Asn Leu Arg Gly Asn Lys Ser Ile Ser Met Ser  
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 Val Ala Arg Ser Arg Gln Gly Ala Cys Phe Gly Gly Ala Gly Gly Phe  
             65                    70                    75                    80  
 Gly Thr Gly Gly Phe Gly Gly Gly Phe Gly Gly Ser Phe Ser Gly Lys  
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 Gly Gly Pro Gly Phe Pro Val Cys Pro Ala Gly Gly Ile Gln Glu Val  
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 Thr Ile Asn Gln Ser Leu Leu Thr Pro Leu His Val Glu Ile Asp Pro  
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 Glu Ile Gln Lys Val Arg Thr Glu Glu Arg Glu Gln Ile Lys Leu Leu  
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 Asn Asn Lys Phe Ala Ser Phe Ile Glu Gln Val Gln Phe Leu Glu Gln  
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 Gln Asn Lys Val Leu Glu Thr Lys Trp Asn Leu Leu Gln Gln Gln Thr  
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 Thr Thr Thr Ser Ser Lys Asn Leu Glu Pro Leu Phe Glu Thr Tyr Leu  
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 Ser Val Leu Arg Lys Gln Leu Asp Thr Leu Gly Asn Asp Lys Gly Arg  
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 Leu Gln Ser Glu Leu Lys Thr Met Gln Asp Ser Val Glu Asp Phe Lys  
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 Thr Lys Tyr Glu Glu Glu Ala His Arg Arg Ala Thr Leu Glu Asn Asp  
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 Phe Val Val Leu Lys Lys Asp Val Asp Gly Val Phe Leu Ser Lys Met  
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Glu Leu Glu Gly Lys Leu Glu Ala Leu Arg Glu Tyr Leu Tyr Phe Leu  
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 305 310 315 320  
 Gln Arg Ser Lys Ala Glu Ala Glu Ala Leu Tyr Gln Thr Lys Val Gln  
 325 330 335  
 Gln Leu Gln Ile Ser Val Asp Gln His Gly Asp Asn Leu Lys Asn Thr  
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 Lys Ser Glu Ile Ala Glu Leu Asn Arg Met Ile Gln Arg Leu Arg Ala  
 355 360 365  
 Glu Ile Glu Asn Ile Lys Lys Gln Cys Gln Thr Leu Gln Val Ser Val  
 370 375 380  
 Ala Asp Ala Glu Gln Arg Gly Glu Asn Ala Leu Lys Asp Ala His Ser  
 385 390 395 400  
 Lys Arg Val Glu Leu Glu Ala Ala Leu Gln Gln Ala Lys Glu Glu Leu  
 405 410 415  
 Ala Arg Met Leu Arg Glu Tyr Gln Glu Leu Met Ser Val Lys Leu Ala  
 420 425 430  
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 435 440 445  
 Tyr Arg Met Ser Gly Glu Cys Gln Ser Ala Val Ser Ile Ala Val Val  
 450 455 460  
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 465 470 475 480  
 Ser Gly Phe Gly Leu Ser Ser Gly Phe Gly Ser Gly Ser Gly Ser Gly  
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 Ser Thr Thr Thr Leu Asn Lys Arg Arg  
 515 520

<210> 11  
 <211> 1113  
 <212> DNA  
 <213> Homo sapiens

<400> 11

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<210> 12

<211> 349

<212> PRT

<213> Homo sapiens

<400> 12

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Asp Gly Ser His Phe Leu Ile Ser Leu Cys Phe Leu Leu Leu Ser Ser
          35          40          45
Asp Val Leu Cys Pro Ser Val Arg Val Glu Gly Asp Arg Phe Lys His
          50          55          60
Thr Asn Gly Gly Thr Lys Glu Ile Thr Gly Leu Asp Leu Met Asp Leu
          65          70          75          80
Phe Ser Val Lys Glu Ile Leu Gly Lys Arg Glu Asn Gly Ala Gln Ser
          85          90          95
Ser Tyr Val Arg Met Gly Ser Phe Pro Val Val Gln Ser Thr Glu Asp
          100          105          110
Val Phe Pro Gln Gly Leu Pro Asp Glu Tyr Ala Phe Val Thr Thr Phe
          115          120          125
Arg Phe Arg Lys Thr Ser Arg Lys Glu Asp Trp Tyr Ile Trp Gln Val
          130          135          140
Ile Asp Gln Tyr Gly Ile Pro Gln Val Ser Ile Arg Leu Asp Gly Glu

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Asn Lys Ala Val	Glu Tyr Asn Ala Val	Gly Ala Met Lys Asp Ala Val				
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Arg Val Val	Phe Arg Gly Ser Arg Val	Asn Asp Leu Phe Asp Arg Asp				
	180	185			190	
Trp His Lys Met Ala Leu Ser Ile	Gln Ala Gln Asn Val Ser Leu His					
	195	200			205	
Ile Asp Cys Ala Leu Val	Gln Thr Leu Pro Ile Glu Glu Arg Glu Asn					
	210	215		220		
Ile Asp Ile Gln Gly Lys Thr Val	Ile Gly Lys Arg Leu Tyr Asp Ser					
	225	230		235		240
Val Pro Ile Asp Val Ser Thr Arg Gly	Pro Ser Ala Ala Gln Val Leu					
	245	250			255	
Arg Pro Pro Gly Arg Ser Leu Gly	Ala Lys Cys Pro Gln Cys Ser Pro					
	260	265			270	
His Leu His Glu Pro Gly Thr	Lys Ser Ser Pro Trp Thr Val Leu Glu					
	275	280			285	
Gly Lys Thr Leu Thr Gln Lys Thr	Ala Ile Phe Glu Pro Gln Phe Thr					
	290	295		300		
Ile Thr His Val Leu Thr His Ser Val	Ile Gln Pro Phe His Gln Ser					
	305	310		315		320
Phe Ile Thr Tyr Thr Leu Ser Thr Tyr	Tyr Val Pro Gly Thr Val Leu					
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Cys Thr Gly Asp Thr Gly Thr Arg	Lys Arg Glu Gln Asp					
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<210> 13  
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 <212> DNA  
 <213> Homo sapiens

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 <211> 91  
 <212> PRT

<213> Homo sapiens

<400> 14

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20 25 30

Lys Phe Pro Ile Phe Lys Ala Val Val Phe Lys Ser Gln Val Val Thr  
35 40 45

Gly Thr Asn Phe His Val Ala Asp Asn Ile Val Tyr Phe Gln Val Phe  
50 55 60

Asn Ser Leu Pro His Glu Asn Lys Pro Leu Thr Ser Ser Asp Tyr Gln  
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Pro Lys Ala Asn Gln Asp Lys Leu Leu Tyr Phe  
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<210> 15

<211> 1152

<212> DNA

<213> Homo sapiens

<400> 15

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<210> 16

<211> 379

<212> PRT

<213> Homo sapiens

<400> 16

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Ile Leu Gly Ser Thr Pro Ser Gly Ala Val Leu Pro Gly Arg Gly Pro	35	40	45
Pro Phe Ser Val Phe Thr Val Leu Val Val Thr Leu Leu Val Leu Leu	50	55	60
Ile Ala Ala Thr Phe Leu Trp Asn Leu Leu Val Pro Val Thr Ile Pro	65	70	75
Arg Val Arg Ala Phe His Arg Val Pro His Asn Leu Val Ala Ser Thr	85	90	95
Ala Val Ser Asp Glu Leu Val Ala Ala Leu Ala Met Pro Pro Ser Leu	100	105	110
Ala Ser Glu Leu Ser Thr Gly Arg Arg Leu Leu Gly Arg Ser Leu	115	120	125
Cys His Val Trp Ile Ser Phe Asp Ala Gly Ala Cys Leu Cys Cys Pro	130	135	140
Ala Gly Leu Gly Asn Val Ala Ala Ile Ala Leu Gly Arg Asp Gly Ala	145	150	155
Ile Thr Arg His Leu Gln His Thr Leu Arg Thr Arg Ser Arg Ala Ser	165	170	175
Leu Leu Met Ile Ala Leu Ala Arg Val Pro Ser Ala Leu Ile Ala Leu	180	185	190
Ala Pro Leu Leu Phe Gly Arg Gly Glu Val Cys Asp Ala Arg Leu Gln	195	200	205
Arg Cys Gln Val Ser Arg Glu Pro Ser Tyr Ala Ala Phe Ser Thr Arg	210	215	220
Gly Ala Phe His Leu Pro Leu Gly Val Val Pro Phe Val Tyr Arg Lys	225	230	235
Ile Tyr Glu Ala Ala Lys Phe Arg Phe Gly Arg Arg Arg Arg Ala Val	245	250	255
Leu Pro Leu Pro Ala Thr Met Gln Val Arg Ser Lys Val Lys Glu Ala	260	265	270
Pro Asp Glu Ala Glu Val Val Phe Thr Ala His Cys Lys Ala Thr Val	275	280	285
Ser Phe Gln Val Ser Gly Asp Ser Trp Arg Glu Gln Lys Glu Arg Arg	290	295	300
Ala Ala Met Met Val Gly Ile Leu Ile Gly Val Phe Val Leu Cys Trp			



Gly Ala Val Arg Met Trp Gly Ile Met Gly Thr Val Leu Leu Thr Gly  
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 Gly Leu Lys Gln Thr Val Cys Phe Ile Asn Phe Ile Asp Asn Ser Thr  
                     100                    105                    110  
 Val Lys Phe Trp Ser Trp Val Phe Leu Leu Ser Lys Val Ile Glu Leu  
                     115                    120                    125  
 Gly Asp Thr Ala Phe Ile Ile Leu Arg Lys Arg Pro Leu Ile Phe Ile  
                     130                    135                    140  
 His Trp Tyr His His Ser Thr Val Leu Val Tyr Thr Ser Phe Gly Tyr  
                     145                    150                    155                    160  
 Lys Asn Lys Val Pro Ala Gly Gly Trp Phe Val Thr Met Asn Phe Gly  
                     165                    170                    175  
 Val His Ala Ile Met Tyr Thr Tyr Tyr Thr Leu Lys Ala Ala Asn Val  
                     180                    185                    190  
 Lys Pro Pro Lys Met Leu Pro Met Leu Ile Thr Ser Leu Gln Ile Leu  
                     195                    200                    205  
 Gln Met Phe Val Gly Ala Ile Val Ser Ile Leu Thr Tyr Ile Trp Arg  
                     210                    215                    220  
 Gln Asp Gln Gly Cys His Thr Thr Met Glu His Leu Phe Trp Ser Phe  
                     225                    230                    235                    240  
 Ile Leu Tyr Met Thr Tyr Phe Ile Leu Phe Ala His Phe Phe Cys Gln  
                     245                    250                    255  
 Thr Tyr Ile Arg Pro Lys Val Lys Ala Lys Thr Lys Ser Gln  
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 <212> DNA  
 <213> Homo sapiens

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815

<210> 20  
<211> 270  
<212> PRT  
<213> Homo sapiens

<400> 20

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			20					25					30			
Tyr	Trp	Ala	Thr	Ser	Phe	Pro	Ile	Ala	Leu	Ile	Tyr	Leu	Val	Leu	Ile	
		35					40					45				
Ala	Val	Gly	Gln	Asn	Tyr	Met	Lys	Glu	Arg	Lys	Gly	Phe	Asn	Leu	Gln	
	50					55					60					
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Gly	Ala	Val	Arg	Met	Trp	Gly	Ile	Met	Gly	Thr	Val	Leu	Leu	Thr	Gly	
				85					90					95		
Gly	Leu	Lys	Gln	Thr	Val	Cys	Phe	Ile	Asn	Phe	Ile	Asp	Asn	Ser	Thr	
			100					105					110			
Val	Lys	Phe	Trp	Ser	Trp	Val	Phe	Leu	Leu	Ser	Lys	Val	Ile	Glu	Leu	
		115					120						125			
Gly	Asp	Thr	Ala	Phe	Ile	Ile	Leu	Arg	Lys	Arg	Pro	Leu	Ile	Phe	Ile	
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His	Trp	Tyr	His	His	Ser	Thr	Val	Leu	Val	Tyr	Thr	Ser	Phe	Gly	Tyr	
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Lys	Asn	Lys	Val	Pro	Ala	Gly	Gly	Trp	Phe	Val	Thr	Met	Asn	Phe	Gly	
				165					170					175		
Val	His	Ala	Ile	Met	Tyr	Thr	Tyr	Tyr	Thr	Leu	Lys	Ala	Ala	Asn	Val	
		180						185					190			
Lys	Pro	Pro	Lys	Met	Leu	Pro	Met	Leu	Ile	Thr	Ser	Leu	Gln	Ile	Leu	
		195					200						205			
Gln	Met	Phe	Val	Gly	Ala	Ile	Val	Ser	Ile	Leu	Thr	Tyr	Ile	Trp	Arg	
	210					215						220				
Gln	Asp	Gln	Gly	Cys	His	Thr	Thr	Met	Glu	His	Leu	Phe	Trp	Ser	Phe	
225					230					235					240	
Ile	Leu	Tyr	Met	Thr	Tyr	Phe	Ile	Leu	Phe	Ala	His	Phe	Phe	Cys	Gln	
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<210> 21  
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 <212> DNA  
 <213> Homo sapiens

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 cgtgtccgac ttcaatgcc a tcgacaagat ccggggcaag ctgcggcgcc gtctttgtga 660  
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 acgggaggg 729

<210> 22  
 <211> 232  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
 Met Ala Gly Leu Arg Gly Asn Ala Val Ala Gly Leu Leu Trp Met Leu  
 1 5 10 15  
 Leu Leu Trp Ser Gly Gly Gly Gly Cys Gln Ala Gln Arg Ala Gly Cys  
 20 25 30  
 Lys Ser Val His Tyr Asp Leu Val Phe Leu Leu Asp Thr Ser Ser Ser  
 35 40 45  
 Val Gly Lys Glu Asp Phe Glu Lys Val Arg Gln Trp Val Ala Asn Leu  
 50 55 60  
 Val Asp Thr Phe Glu Val Gly Pro Asp Arg Thr Arg Val Gly Val Val  
 65 70 75 80  
 Arg Tyr Ser Asp Arg Pro Thr Thr Ala Phe Glu Leu Gly Leu Phe Gly  
 85 90 95  
 Ser Gln Glu Glu Val Lys Ala Ala Ala Arg Arg Leu Ala Tyr His Gly  
 100 105 110  
 Gly Asn Thr Asn Thr Gly Asp Ala Leu Arg Tyr Ile Thr Ala Arg Ser  
 115 120 125  
 Phe Ser Pro His Ala Gly Gly Arg Pro Arg Asp Arg Ala Tyr Lys Gln  
 130 135 140

Val Ala Ile Leu Leu Thr Asp Gly Arg Ser Gln Asp Leu Val Leu Asp  
145 150 155 160

Ala Ala Ala Ala Ala His Arg Ala Gly Ile Arg Ile Phe Ala Val Gly  
165 170 175

Val Gly Glu Ala Leu Lys Glu Glu Leu Glu Glu Ile Ala Ser Glu Pro  
180 185 190

Lys Ser Ala His Val Phe His Val Ser Asp Phe Asn Ala Ile Asp Lys  
195 200 205

Ile Arg Gly Lys Leu Arg Arg Arg Leu Cys Glu Ser Glu Cys Ala Arg  
210 215 220

Ala Pro Cys Gly Pro Ser Gln Glu  
225 230

<210> 23  
<211> 682  
<212> DNA  
<213> Homo sapiens

<400> 23  
catgggcaca agtagcttga aattatggaa gtatgtcctg tctttctttc ttttctttct 60  
ttctttctta ctctctctca ctttcgggat gtaccgctg atccacaaca gtttgggagt 120  
gctcttccat aagctcccct ccctcatgcc gggcaatgtg cttgtcatcg tggctccat 180  
tatcacggtg gttgccttcc tgggctgcat aggttctgtc aagaaaaaca ggtgcctgct 240  
tatgtccttg ttcattctgc tgccggttat cctccttgct gaggtgatct tggccatcct 300  
gcactttgtt tacgaacgga agctgaatgt atacgtagct gagggcctga cggacagcat 360  
ctaccattac cactgggaca acagcaccaa ggcgatgtgg gactccatcc agtcattctg 420  
cacttgctgt ggcgtaaatg gcatgagtga ttgggtccagc ggaccgcaag catcttgccc 480  
ctcagatcca aaagtgaaag ggtgctatgc aaaagcgaga ctgtgggttc acgccaattt 540  
cctgtatata agaatcatca ccatctgtgt aatatgtgca atccagggtg tgaggatgct 600  
ctttgactg accccaaaca gccagattga taaaaccagt caggccctgg ggggtgtgacc 660  
tgcaactgcc ctgtgctggg ga 682

<210> 24  
<211> 218  
<212> PRT  
<213> Homo sapiens

<400> 24  
Met Gly Thr Ser Ser Leu Lys Leu Trp Lys Tyr Val Leu Ser Phe Phe  
1 5 10 15  
Leu Phe Phe Leu Ser Phe Leu Leu Ser Leu Thr Phe Gly Met Tyr Pro  
20 25 30  
Leu Ile His Asn Ser Leu Gly Val Leu Phe His Lys Leu Pro Ser Leu  
35 40 45  
Met Pro Gly Asn Val Leu Val Ile Val Val Ser Ile Ile Thr Val Val  
50 55 60

Ala Phe Leu Gly Cys Ile Gly Ser Val Lys Lys Asn Arg Cys Leu Leu  
 65 70 75 80  
 Met Ser Leu Phe Ile Leu Leu Pro Val Ile Leu Leu Ala Glu Val Ile  
 85 90 95  
 Leu Ala Ile Leu His Phe Val Tyr Glu Arg Lys Leu Asn Val Tyr Val  
 100 105 110  
 Ala Glu Gly Leu Thr Asp Ser Ile Tyr His Tyr His Trp Asp Asn Ser  
 115 120 125  
 Thr Lys Ala Met Trp Asp Ser Ile Gln Ser Phe Cys Thr Cys Cys Gly  
 130 135 140  
 Val Asn Gly Met Ser Asp Trp Ser Ser Gly Pro Gln Ala Ser Cys Pro  
 145 150 155 160  
 Ser Asp Pro Lys Val Lys Gly Cys Tyr Ala Lys Ala Arg Leu Trp Phe  
 165 170 175  
 His Ala Asn Phe Leu Tyr Ile Arg Ile Ile Thr Ile Cys Val Ile Cys  
 180 185 190  
 Ala Ile Gln Val Val Arg Met Ser Phe Ala Leu Thr Pro Asn Ser Gln  
 195 200 205  
 Ile Asp Lys Thr Ser Gln Ala Leu Gly Val  
 210 215

<210> 25  
 <211> 1580  
 <212> DNA  
 <213> Homo sapiens

<400> 25  
 cgtggtgacc ccgggggatg gagccgttcc tcaggaggcg gctggccttc ctgtccttct 60  
 tctgggacaa gatctggccg gcgggcgggc agccggacca tggcaccccc gggtccttgg 120  
 accccaacac tgacccagt cccacgctcc ccgcccagcc ttgcagcccc ttccctcagc 180  
 tcttccttgc gctctatgac ttacaggcgc ggtgtggcgg ggagctgagt gtccgcccgc 240  
 gggacaggct ctgtgccctc gaagaggggg gcggctacat cttcgcacgc aggccttccg 300  
 gccagcccag cgccgggctc gtgcccata cccacgtggc caaggcttct cctgagacgc 360  
 tctcagacca accgctgct gtttgcagct ggtactttag cggggtcagt cggacccagg 420  
 cacagcagct gtcctctcc ccaccaacg aaccaggggc cttcctcatc cggcccagcg 480  
 agagcagcct cgggggctac tcaactgtcag tccgggcca ggccaaggctc tgccactacc 540  
 gggctctccat ggcagctgat ggcagcctct acctgcagaa gggacggctc tttcccggcc 600  
 tggaggagct gctcacctac tacaaggcca actggaagct gatccagaac cccctgctgc 660  
 agccctgcat gccccaggtg ggccctgcct gccaccctc cctgcagaag gccctgcggc 720  
 aggacgtgtg ggagcgggcca cactccgaat tcgcccttgg gaggaagctg ggtgaagct 780  
 actttgggga ggtgtgggaa ggccctgtggc tgggctccct gcccggtggc atcaaggctc 840  
 tcaagtcagc caacatgaag ctcaactgacc tcgccaagga gatccagaca ctgaagggcc 900  
 tgccggcacga gcggctcatc cggctgcacg cagtgtgctc gggcggggag cctgtgtaca 960  
 tcttcacgga actcatgcgc aaggggaacc tgcaggcctt cctgggcagt ggctctgctc 1020  
 cactccctc tgcagactct gatgagaaag tcctgcccgt ttcggagctg ctggacatcg 1080  
 cctggcaggt ggctgagggc atgtgttacc tggagtcgca gaattacatc caccgggacc 1140

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tggccgcccag gaacatcctc gtcgggggaaa acaccctctg caaagttggg gacttcgggt 1200
tagccaggct tatcaaggta gggccctcag agggccagga cgacatctac tccccgagca 1260
gcagctccaa gatcccggtc aagtggacag cgcctgaggc ggccaattat cgtgtcttct 1320
cccagaagtc agacgtctgg tccttcggcg tcctgctgca cgaggttttc acctatggcc 1380
agtgtcccta tgaagggtgg atgaccaacc acgagacgct gcagcagatc atgcgagggt 1440
accggctgcc gcgcccggct gcctgcccga cggagggtcta cttgctcatg ctggagtgtc 1500
ggaggagcag ccccgaggaa cggccctcct tcgccacgct gcgggagaag ctgcacgcca 1560
tccacagatg ccaccctga 1580

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<210> 26
<211> 520
<212> PRT
<213> Homo sapiens

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<400> 26
Met Glu Pro Phe Leu Arg Arg Arg Leu Ala Phe Leu Ser Phe Phe Trp
  1             5             10             15

Asp Lys Ile Trp Pro Ala Gly Gly Glu Pro Asp His Gly Thr Pro Gly
      20             25             30

Ser Leu Asp Pro Asn Thr Asp Pro Val Pro Thr Leu Pro Ala Glu Pro
      35             40             45

Cys Ser Pro Phe Pro Gln Leu Phe Leu Ala Leu Tyr Asp Phe Thr Ala
      50             55             60

Arg Cys Gly Gly Glu Leu Ser Val Arg Arg Gly Asp Arg Leu Cys Ala
      65             70             75             80

Leu Glu Glu Gly Gly Gly Tyr Ile Phe Ala Arg Arg Leu Ser Gly Gln
      85             90             95

Pro Ser Ala Gly Leu Val Pro Ile Thr His Val Ala Lys Ala Ser Pro
      100            105            110

Glu Thr Leu Ser Asp Gln Pro Pro Ala Val Cys Ser Trp Tyr Phe Ser
      115            120            125

Gly Val Ser Arg Thr Gln Ala Gln Gln Leu Leu Leu Ser Pro Pro Asn
      130            135            140

Glu Pro Gly Ala Phe Leu Ile Arg Pro Ser Glu Ser Ser Leu Gly Gly
      145            150            155            160

Tyr Ser Leu Ser Val Arg Ala Gln Ala Lys Val Cys His Tyr Arg Val
      165            170            175

Ser Met Ala Ala Asp Gly Ser Leu Tyr Leu Gln Lys Gly Arg Leu Phe
      180            185            190

Pro Gly Leu Glu Glu Leu Leu Thr Tyr Tyr Lys Ala Asn Trp Lys Leu
      195            200            205

Ile Gln Asn Pro Leu Leu Gln Pro Cys Met Pro Gln Val Gly Leu Pro
      210            215            220

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Cys Pro Pro Ser Leu Gln Lys Ala Leu Arg Gln Asp Val Trp Glu Arg  
 225 230 235 240  
 Pro His Ser Glu Phe Ala Leu Gly Arg Lys Leu Gly Glu Gly Tyr Phe  
 245 250 255  
 Gly Glu Val Trp Glu Gly Leu Trp Leu Gly Ser Leu Pro Val Ala Ile  
 260 265 270  
 Lys Val Ile Lys Ser Ala Asn Met Lys Leu Thr Asp Leu Ala Lys Glu  
 275 280 285  
 Ile Gln Thr Leu Lys Gly Leu Arg His Glu Arg Leu Ile Arg Leu His  
 290 295 300  
 Ala Val Cys Ser Gly Gly Glu Pro Val Tyr Ile Leu Thr Glu Leu Met  
 305 310 315 320  
 Arg Lys Gly Asn Leu Gln Ala Phe Leu Gly Ser Gly Ser Ala Pro Leu  
 325 330 335  
 Pro Ser Ala Asp Ser Asp Glu Lys Val Leu Pro Val Ser Glu Leu Leu  
 340 345 350  
 Asp Ile Ala Trp Gln Val Ala Glu Gly Met Cys Tyr Leu Glu Ser Gln  
 355 360 365  
 Asn Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Gly Glu  
 370 375 380  
 Asn Thr Leu Cys Lys Val Gly Asp Phe Gly Leu Ala Arg Leu Ile Lys  
 385 390 395 400  
 Val Gly Pro Ser Glu Gly Gln Asp Asp Ile Tyr Ser Pro Ser Ser Ser  
 405 410 415  
 Ser Lys Ile Pro Val Lys Trp Thr Ala Pro Glu Ala Ala Asn Tyr Arg  
 420 425 430  
 Val Phe Ser Gln Lys Ser Asp Val Trp Ser Phe Gly Val Leu Leu His  
 435 440 445  
 Glu Val Phe Thr Tyr Gly Gln Cys Pro Tyr Glu Gly Gly Met Thr Asn  
 450 455 460  
 His Glu Thr Leu Gln Gln Ile Met Arg Gly Tyr Arg Leu Pro Arg Pro  
 465 470 475 480  
 Ala Ala Cys Pro Thr Glu Val Tyr Leu Leu Met Leu Glu Cys Trp Arg  
 485 490 495  
 Ser Ser Pro Glu Glu Arg Pro Ser Phe Ala Thr Leu Arg Glu Lys Leu  
 500 505 510  
 His Ala Ile His Arg Cys His Pro  
 515 520

<210> 27  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 27  
ctgtggtttc acgccaattt cctgta

26

<210> 28  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 28  
accacctgga ttgcacatat ta

22

<210> 29  
<211> 257  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Consensus  
sequence

<400> 29  
Thr Leu Gly Lys Lys Leu Gly Glu Gly Ala Phe Gly Glu Val Tyr Lys  
1 5 10 15  
Gly Thr Leu Lys Gly Lys Gly Gly Val Glu Val Glu Val Ala Val Lys  
20 25 30  
Thr Leu Lys Glu Asp Ala Ser Glu Gln Gln Ile Glu Glu Phe Leu Arg  
35 40 45  
Glu Ala Arg Leu Met Arg Lys Leu Asp His Pro Asn Ile Val Lys Leu  
50 55 60  
Leu Gly Val Cys Thr Glu Glu Glu Pro Leu Met Ile Val Met Glu Tyr  
65 70 75 80  
Met Glu Gly Gly Asp Leu Leu Asp Tyr Leu Arg Lys Asn Arg Pro Lys  
85 90 95  
Glu Leu Ser Leu Ser Asp Leu Leu Ser Phe Ala Leu Gln Ile Ala Arg

100	105	110
Gly Met Glu Tyr Leu Glu Ser Lys Asn Phe Val His Arg Asp Leu Ala		
115	120	125
Ala Arg Asn Cys Leu Val Gly Glu Asn Lys Thr Val Lys Ile Ala Asp		
130	135	140
Phe Gly Leu Ala Arg Asp Leu Tyr Asp Asp Asp Tyr Tyr Arg Lys Lys		
145	150	155
Lys Ser Pro Arg Leu Pro Ile Arg Trp Met Ala Pro Glu Ser Leu Lys		
165	170	175
Asp Gly Lys Phe Thr Ser Lys Ser Asp Val Trp Ser Phe Gly Val Leu		
180	185	190
Leu Trp Glu Ile Phe Thr Leu Gly Glu Ser Pro Tyr Pro Gly Met Ser		
195	200	205
Asn Glu Glu Val Leu Glu Tyr Leu Lys Lys Gly Tyr Arg Leu Pro Gln		
210	215	220
Pro Pro Asn Cys Pro Asp Glu Ile Tyr Asp Leu Met Leu Gln Cys Trp		
225	230	235
Ala Glu Asp Pro Glu Asp Arg Pro Thr Phe Ser Glu Leu Val Glu Arg		
245	250	255

Leu

<210> 30  
 <211> 254  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 30  
 Tyr Glu Leu Gly Glu Lys Leu Gly Ser Gly Ala Phe Gly Lys Val Tyr  
 1 5 10 15  
 Lys Gly Lys His Lys Asp Thr Gly Glu Ile Val Ala Ile Lys Ile Leu  
 20 25 30  
 Lys Lys Arg Ser Leu Ser Glu Lys Lys Arg Phe Leu Arg Glu Ile  
 35 40 45  
 Gln Ile Leu Arg Arg Leu Ser His Pro Asn Ile Val Arg Leu Leu Gly  
 50 55 60  
 Val Phe Glu Glu Asp Asp His Leu Tyr Leu Val Met Glu Tyr Met Glu  
 65 70 75 80



Asp Val Phe Glu Asp Asp Asp Lys Leu Tyr Leu Val Met Glu Tyr Cys  
 65 70 75 80  
 Glu Gly Gly Asp Leu Phe Asp Leu Leu Lys Lys Arg Gly Arg Leu Ser  
 85 90 95  
 Glu Asp Glu Ala Arg Phe Tyr Ala Arg Gln Ile Leu Ser Ala Leu Glu  
 100 105 110  
 Tyr Leu His Ser Gln Gly Ile Ile His Arg Asp Leu Lys Pro Glu Asn  
 115 120 125  
 Ile Leu Leu Asp Ser Asp Gly His Val Lys Leu Ala Asp Phe Gly Leu  
 130 135 140  
 Ala Lys Gln Leu Asp Ser Gly Gly Thr Leu Leu Thr Thr Phe Val Gly  
 145 150 155 160  
 Thr Pro Glu Tyr Met Ala Pro Glu Val Leu Leu Gly Lys Gly Tyr Gly  
 165 170 175  
 Lys Ala Val Asp Ile Trp Ser Leu Gly Val Ile Leu Tyr Glu Leu Leu  
 180 185 190  
 Thr Gly Lys Pro Pro Phe Pro Gly Asp Asp Gln Leu Leu Ala Leu Phe  
 195 200 205  
 Lys Lys Ile Gly Lys Pro Pro Pro Phe Pro Pro Glu Trp Lys  
 210 215 220  
 Ile Ser Pro Glu Ala Lys Asp Leu Ile Lys Lys Leu Leu Val Lys Asp  
 225 230 235 240  
 Pro Glu Lys Arg Leu Thr Ala Glu Glu Ala  
 245 250

<210> 32  
 <211> 312  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 32  
 Asn Glu Lys Glu Gln Met Gln Asn Leu Asn Asp Arg Leu Ala Ser Tyr  
 1 5 10 15  
 Ile Asp Lys Val Arg Phe Leu Glu Gln Asn Lys Glu Leu Glu Val  
 20 25 30  
 Lys Ile Glu Glu Leu Arg Gln Lys Gln Ala Pro Ser Val Ser Arg Leu  
 35 40 45  
 Tyr Ser Leu Tyr Glu Thr Glu Ile Glu Glu Leu Arg Arg Gln Ile Asp

50	55	60
Gln Leu Thr Asn Glu Arg Ala Arg Leu Gln Leu Glu Ile Asp Asn Leu		
65	70	75 80
Arg Glu Ala Ala Glu Asp Phe Arg Lys Lys Tyr Glu Asp Glu Ile Asn		
	85	90 95
Leu Arg Gln Glu Ala Glu Asn Asp Leu Val Gly Leu Arg Lys Asp Leu		
	100	105 110
Asp Glu Ala Thr Leu Ala Arg Val Asp Leu Glu Asn Lys Val Glu Ser		
	115	120 125
Leu Gln Glu Glu Leu Glu Phe Leu Lys Lys Asn His Glu Glu Glu Val		
	130	135 140
Lys Glu Leu Gln Ala Gln Ile Gln Asp Thr Val Asn Val Glu Met Asp		
	145	150 155 160
Ala Ala Arg Lys Leu Asp Leu Thr Lys Ala Leu Arg Glu Ile Arg Ala		
	165	170 175
Gln Tyr Glu Glu Ile Ala Lys Lys Asn Arg Gln Glu Ala Glu Glu Trp		
	180	185 190
Tyr Lys Ser Lys Leu Glu Glu Leu Gln Thr Ala Ala Ala Arg Asn Gly		
	195	200 205
Glu Ala Leu Arg Ser Ala Lys Glu Glu Ile Thr Glu Leu Arg Arg Gln		
	210	215 220
Ile Gln Ser Leu Glu Ile Glu Leu Gln Ser Leu Lys Ala Gln Asn Ala		
	225	230 235 240
Ser Leu Glu Arg Gln Leu Ala Glu Leu Glu Glu Arg Tyr Glu Leu Glu		
	245	250 255
Leu Arg Gln Tyr Gln Ala Leu Ile Ser Gln Leu Glu Glu Glu Leu Gln		
	260	265 270
Gln Leu Arg Glu Glu Met Ala Arg Gln Leu Arg Glu Tyr Gln Glu Leu		
	275	280 285
Leu Asp Val Lys Leu Ala Leu Asp Ile Glu Ile Ala Thr Tyr Arg Lys		
	290	295 300
Leu Leu Glu Gly Glu Glu Ser Arg		
305	310	

<210> 33

<211> 336

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Consensus  
sequence

<400> 33

Glu	Lys	Lys	Ala	Lys	Gln	Leu	Glu	Ser	Gln	Leu	Ser	Glu	Leu	Gln	Val	1	5	10	15
Lys	Leu	Asp	Glu	Leu	Gln	Arg	Gln	Leu	Asn	Asp	Leu	Thr	Ser	Gln	Lys	20	25	30	
Ser	Arg	Leu	Gln	Ser	Glu	Asn	Ser	Asp	Leu	Thr	Arg	Gln	Leu	Glu	Glu	35	40	45	
Ala	Glu	Ala	Gln	Val	Ser	Asn	Leu	Ser	Lys	Leu	Lys	Ser	Gln	Leu	Glu	50	55	60	
Ser	Gln	Leu	Glu	Glu	Ala	Lys	Arg	Ser	Leu	Glu	Glu	Glu	Ser	Arg	Glu	65	70	75	80
Arg	Ala	Asn	Leu	Gln	Ala	Gln	Leu	Arg	Gln	Leu	Glu	His	Asp	Leu	Asp	85	90	95	
Ser	Leu	Arg	Glu	Gln	Leu	Glu	Glu	Glu	Ser	Glu	Ala	Lys	Ala	Glu	Leu	100	105	110	
Glu	Arg	Gln	Leu	Ser	Lys	Ala	Asn	Ala	Glu	Ile	Gln	Gln	Trp	Arg	Ser	115	120	125	
Lys	Phe	Glu	Ser	Glu	Gly	Ala	Leu	Arg	Ala	Glu	Glu	Leu	Glu	Glu	Leu	130	135	140	
Lys	Lys	Lys	Leu	Asn	Gln	Lys	Ile	Ser	Glu	Leu	Glu	Glu	Ala	Ala	Glu	145	150	155	160
Ala	Ala	Asn	Ala	Lys	Cys	Asp	Ser	Leu	Glu	Lys	Thr	Lys	Ser	Arg	Leu	165	170	175	
Gln	Ser	Glu	Leu	Glu	Asp	Leu	Gln	Ile	Glu	Leu	Glu	Arg	Ala	Asn	Ala	180	185	190	
Ala	Ala	Ser	Glu	Leu	Glu	Lys	Lys	Gln	Lys	Asn	Phe	Asp	Lys	Ile	Leu	195	200	205	
Ala	Glu	Trp	Lys	Arg	Lys	Val	Asp	Glu	Leu	Gln	Ala	Glu	Leu	Asp	Thr	210	215	220	
Ala	Gln	Arg	Glu	Ala	Arg	Asn	Leu	Ser	Thr	Glu	Leu	Phe	Arg	Leu	Lys	225	230	235	240
Asn	Glu	Leu	Glu	Glu	Leu	Lys	Asp	Gln	Val	Glu	Ala	Leu	Arg	Arg	Glu	245	250	255	
Asn	Lys	Asn	Leu	Gln	Asp	Glu	Ile	His	Asp	Leu	Thr	Asp	Gln	Leu	Gly	260	265	270	
Glu	Gly	Gly	Arg	Asn	Val	His	Glu	Leu	Glu	Lys	Ala	Arg	Arg	Arg	Leu	275	280	285	

Glu Ala Glu Lys Asp Glu Leu Gln Ala Ala Leu Glu Glu Ala Glu Ala  
 290 295 300

Ala Leu Glu Leu Glu Glu Ser Lys Val Leu Arg Ala Gln Val Glu Leu  
 305 310 315 320

Ser Gln Ile Arg Ser Glu Ile Glu Arg Arg Leu Ala Glu Lys Glu Glu  
 325 330 335

<210> 34  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 34  
 Lys Phe Leu Lys Ser Pro Lys Lys Glu Phe Arg Lys Ile Leu Asp Leu  
 1 5 10 15  
 Leu Gln Arg Tyr Ala Leu Ile His Pro Asn Val Ser Phe Ser Leu Thr  
 20 25 30  
 Lys Glu Gly Lys Ala Leu Leu Gln Leu Lys Thr Ser Pro Ser Ser Leu  
 35 40 45  
 Lys Glu Arg Ile Arg Ser Val Phe Gly Thr Ala Val Leu Lys Asn Leu  
 50 55 60  
 Ile Pro Phe Glu Glu Lys Asp Gly Asp Phe Arg Ile  
 65 70 75

<210> 35  
 <211> 55  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 35  
 Gly Gly Leu Ser Pro Ala Asp Asp Asn Glu Asn Asp Pro Glu Val Gln  
 1 5 10 15  
 Glu Ala Ala Asp Phe Ala Val Ala Glu Tyr Asn Glu Lys Ser Asp Gly  
 20 25 30  
 Tyr Lys Phe Glu Leu Val Glu Val Val Arg Ala Lys Ser Gln Val Val



35                                      40                                      45  
 Ala Gly Thr Leu Thr Asn Tyr  
     50                                      55  
  
 <210> 36  
 <211> 253  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:Consensus  
         sequence  
  
 <400> 36  
 Asn Leu Leu Val Ile Leu Val Ile Leu Arg Thr Lys Lys Leu Arg Thr  
   1                                      5                                      10                                      15  
 Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu Phe  
           20                                      25                                      30  
 Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly Asp  
           35                                      40                                      45  
 Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe Val  
           50                                      55                                      60  
 Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile Asp  
           65                                      70                                      75                                      80  
 Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg Thr  
                   85                                      90                                      95  
 Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala Leu  
           100                                      105                                      110  
 Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val Glu  
           115                                      120                                      125  
 Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser Val  
           130                                      135                                      140  
 Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu Pro  
           145                                      150                                      155                                      160  
 Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu Arg  
                   165                                      170                                      175  
 Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser Glu  
                   180                                      185                                      190  
 Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Val Phe Val Leu  
           195                                      200                                      205  
 Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys Leu  
           210                                      215                                      220

Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu Trp  
 225 230 235 240

Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr  
 245 250

<210> 37  
 <211> 269  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 37  
 Gln Val Val Thr Tyr Ser Thr Val Tyr Arg Phe Pro Gly Lys Gln Phe  
 1 5 10 15

Glu Phe Ile Tyr Gly Lys Thr Ile Leu Phe Glu Ser Tyr His Ala Ile  
 20 25 30

Lys Ile Ile Asn Arg Tyr Tyr Ile Ile Ile Phe Gly Gly Gln Gln Ile  
 35 40 45

Met Glu Lys Tyr Lys Pro Phe Lys Leu Lys Thr Pro Leu Gln Val His  
 50 55 60

Asn Leu Phe Leu Thr Ser Phe Ser Ile Leu Leu Leu Leu Met Val  
 65 70 75 80

Glu Gln Leu Val Pro Ser Val Tyr Ala Glu Gly Leu Tyr Phe Ser Ile  
 85 90 95

Cys Asn Ser Glu Ala Trp Thr Gln Val Leu Val Thr Leu Tyr Tyr Leu  
 100 105 110

Asn Tyr Met Ser Lys Phe Val Glu Leu Ile Asp Thr Val Phe Ile Val  
 115 120 125

Leu Arg Lys Arg Lys Leu Ile Phe Leu His Thr Tyr His His Gly Ala  
 130 135 140

Thr Ala Leu Leu Cys Tyr His Gln Leu Lys Gly His Thr Ala Val Gly  
 145 150 155 160

Trp Val Pro Ile Leu Leu Asn Leu Gly Val His Val Leu Met Tyr Trp  
 165 170 175

Tyr Tyr Phe Leu Ser Ala Leu Gly Ile Arg Val Trp Trp Lys Met Trp  
 180 185 190

Val Thr Arg Leu Gln Ile Ile Gln Phe Leu Leu Asp Val Ile Phe Ile  
 195 200 205

Tyr Phe Ala Val Tyr Gln Lys Lys Val His Gly Tyr Leu Pro Ile Leu  
 210 215 220

Pro Asn Cys Gly Asp Cys Gln Gly Ser Trp Ala Ala Leu Ala Leu Gly  
 225 230 235 240

Phe Ala Ile Tyr Thr Ser Tyr Leu Leu Leu Phe Ile Ser Phe Tyr Ile  
 245 250 255

His Ala Tyr Lys Lys Lys Ser Asn Lys Thr Val Lys Lys  
 260 265

<210> 38

<211> 176

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Consensus  
 sequence

<400> 38

Asp Ile Val Phe Leu Leu Asp Gly Ser Gly Ser Ile Gly Pro Gln Asn  
 1 5 10 15

Phe Glu Arg Val Lys Asp Phe Val Glu Arg Val Val Glu Arg Leu Asp  
 20 25 30

Ile Gly Pro Asp Lys Val Arg Val Gly Leu Val Gln Tyr Ser Asp Asn  
 35 40 45

Val Arg Thr Glu Phe Lys Leu Asn Asp Tyr Gln Asn Lys Asp Glu Val  
 50 55 60

Leu Gln Ala Leu Arg Lys Ile Gln Tyr Tyr Gly Gly Gly Gly Thr Asn  
 65 70 75 80

Thr Gly Thr Ala Leu Gln Tyr Val Val Arg Asn Leu Phe Thr Glu Ala  
 85 90 95

Ser Gly Ser Arg Glu Gly Ala Pro Lys Val Leu Val Val Leu Thr Asp  
 100 105 110

Gly Arg Ser Gln Asp Asp Pro Ile Arg Asp Val Leu Asn Glu Leu Lys  
 115 120 125

Lys Ala Gly Val Asn Val Phe Ala Ile Gly Val Gly Asn Ala Asp Asn  
 130 135 140

Val Glu Glu Leu Arg Glu Ile Ala Ser Lys Pro Asp Glu Gln His Val  
 145 150 155 160

Phe Lys Val Ser Asp Phe Glu Ala Leu Asp Thr Leu Gln Glu Leu Leu  
 165 170 175

<210> 39  
 <211> 166  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 39  
 Ser Ser Phe Ser Glu Leu Leu Gly Ser Leu Ser Ser Leu Val Ala Ala  
 1 5 10 15  
 Tyr Val Leu Ile Ala Val Gly Ala Ile Leu Phe Leu Val Gly Phe Leu  
 20 25 30  
 Gly Cys Cys Gly Ala Ile Arg Glu Ser Arg Cys Leu Leu Gly Leu Tyr  
 35 40 45  
 Phe Val Phe Leu Leu Leu Ile Phe Ile Leu Glu Val Ala Ala Gly Ile  
 50 55 60  
 Leu Ala Phe Val Phe Arg Asp Lys Leu Glu Ser Ser Leu Asn Glu Ser  
 65 70 75 80  
 Leu Lys Asn Ala Ile Lys Asn Tyr Tyr Asp Thr Asp Pro Asp Glu Arg  
 85 90 95  
 Asn Ala Trp Asp Lys Leu Gln Glu Gln Phe Lys Cys Cys Gly Val Asn  
 100 105 110  
 Gly Tyr Thr Asp Trp Phe Asp Ser Gln Trp Phe Ser Asn Gly Val Pro  
 115 120 125  
 Phe Ser Cys Cys Asn Pro Ser Val Ser Cys Asn Ser Ala Gln Asp Glu  
 130 135 140  
 Glu Asp Thr Ile Tyr Gln Glu Gly Cys Leu Glu Lys Leu Leu Glu Trp  
 145 150 155 160  
 Leu Glu Glu Asn Leu Leu  
 165

<210> 40  
 <211> 256  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Consensus  
 sequence

<400> 40

Leu Gly Lys Lys Leu Gly Glu Gly Ala Phe Gly Glu Val Tyr Lys Gly  
 1 5 10 15  
 Thr Leu Lys Gly Lys Gly Gly Val Glu Val Glu Val Ala Val Lys Thr  
 20 25 30  
 Leu Lys Glu Asp Ala Ser Glu Gln Gln Ile Glu Glu Phe Leu Arg Glu  
 35 40 45  
 Ala Arg Leu Met Arg Lys Leu Asp His Pro Asn Ile Val Lys Leu Leu  
 50 55 60  
 Gly Val Cys Thr Glu Glu Glu Pro Leu Met Ile Val Met Glu Tyr Met  
 65 70 75 80  
 Glu Gly Gly Asp Leu Leu Asp Tyr Leu Arg Lys Asn Arg Pro Lys Glu  
 85 90 95  
 Leu Ser Leu Ser Asp Leu Leu Ser Phe Ala Leu Gln Ile Ala Arg Gly  
 100 105 110  
 Met Glu Tyr Leu Glu Ser Lys Asn Phe Val His Arg Asp Leu Ala Ala  
 115 120 125  
 Arg Asn Cys Leu Val Gly Glu Asn Lys Thr Val Lys Ile Ala Asp Phe  
 130 135 140  
 Gly Leu Ala Arg Asp Leu Tyr Asp Asp Asp Tyr Tyr Arg Lys Lys Lys  
 145 150 155 160  
 Ser Pro Arg Leu Pro Ile Arg Trp Met Ala Pro Glu Ser Leu Lys Asp  
 165 170 175  
 Gly Lys Phe Thr Ser Lys Ser Asp Val Trp Ser Phe Gly Val Leu Leu  
 180 185 190  
 Trp Glu Ile Phe Thr Leu Gly Glu Ser Pro Tyr Pro Gly Met Ser Asn  
 195 200 205  
 Glu Glu Val Leu Glu Tyr Leu Lys Lys Gly Tyr Arg Leu Pro Gln Pro  
 210 215 220  
 Pro Asn Cys Pro Asp Glu Ile Tyr Asp Leu Met Leu Gln Cys Trp Ala  
 225 230 235 240  
 Glu Asp Pro Glu Asp Arg Pro Thr Phe Ser Glu Leu Val Glu Arg Leu  
 245 250 255

<210> 41

<211> 252

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Consensus  
sequence

<400> 41

Tyr Glu Leu Gly Glu Lys Leu Gly Ser Gly Ala Phe Gly Lys Val Tyr  
1 5 10 15  
Lys Gly Lys His Lys Asp Thr Gly Glu Ile Val Ala Ile Lys Ile Leu  
20 25 30  
Lys Lys Arg Ser Leu Ser Glu Lys Lys Arg Phe Leu Arg Glu Ile  
35 40 45  
Gln Ile Leu Arg Arg Leu Ser His Pro Asn Ile Val Arg Leu Leu Gly  
50 55 60  
Val Phe Glu Glu Asp Asp His Leu Tyr Leu Val Met Glu Tyr Met Glu  
65 70 75 80  
Gly Gly Asp Leu Phe Asp Tyr Leu Arg Arg Asn Gly Leu Leu Leu Ser  
85 90 95  
Glu Lys Glu Ala Lys Lys Ile Ala Leu Gln Ile Leu Arg Gly Leu Glu  
100 105 110  
Tyr Leu His Ser Arg Gly Ile Val His Arg Asp Leu Lys Pro Glu Asn  
115 120 125  
Ile Leu Leu Asp Glu Asn Gly Thr Val Lys Ile Ala Asp Phe Gly Leu  
130 135 140  
Ala Arg Lys Leu Glu Ser Ser Ser Tyr Glu Lys Leu Thr Thr Phe Val  
145 150 155 160  
Gly Thr Pro Glu Tyr Met Ala Pro Glu Val Leu Glu Gly Arg Gly Tyr  
165 170 175  
Ser Ser Lys Val Asp Val Trp Ser Leu Gly Val Ile Leu Tyr Glu Leu  
180 185 190  
Leu Thr Gly Lys Leu Pro Phe Pro Gly Ile Asp Pro Leu Glu Glu Leu  
195 200 205  
Phe Arg Ile Lys Glu Arg Pro Arg Leu Arg Leu Pro Leu Pro Pro Asn  
210 215 220  
Cys Ser Glu Glu Leu Lys Asp Leu Ile Lys Lys Cys Leu Asn Lys Asp  
225 230 235 240  
Pro Glu Lys Arg Pro Thr Ala Lys Glu Ile Leu Asn  
245 250

<210> 42

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 42

ccctgtgggg ccggctgcat ct

22

<210> 43

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 43

agctcaggtc gggttctcgt agctggtgaa

30

<210> 44

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 44

aagctgctca tcttcaacac ataccag

27

<210> 45

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 45

gcctgcaggt ccctgtcac

19

<210> 46

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 46  
 atggtcacag ccatgaatgt ctcacat 27

<210> 47  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer

<400> 47  
 cttcactggc tcttggtctt ggcttt 26

<210> 48  
 <211> 20  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer

<400> 48  
 ctgcagtccc agatctcaga 20

<210> 49  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer

<400> 49  
 gtctgtggtg ctgtccatgg acaac 25

<210> 50  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer

<400> 50  
 tactgtgcct tgacctcagc 20



<210> 51  
 <211> 20  
 <212> DNA  
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 <220>  
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       primer  
  
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 <210> 52  
 <211> 25  
 <212> DNA  
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 <400> 52  
 cccaaggtt tacctgatga gtacg 25  
  
 <210> 53  
 <211> 19  
 <212> DNA  
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       primer  
  
 <400> 53  
 cggaaggttg tgacaaagg 19  
  
 <210> 54  
 <211> 20  
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 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 54  
 tggtcacagg gacaaaacttc 20  
  
 <210> 55  
 <211> 27  
 <212> DNA  
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<220>  
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       primer  
  
 <400> 55  
 cgttgctgat aacatcgtat acttcca 27  
  
 <210> 56  
 <211> 20  
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 <220>  
 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 56  
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 <210> 57  
 <211> 22  
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 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 57  
 atctcagcat ccttggtacc tt 22  
  
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 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 58  
 caactctctg gtcctttctg ccctgt 26  
  
 <210> 59  
 <211> 19  
 <212> DNA  
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 <220>  
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       primer  
  
 <400> 59

acacgtcatc gtggtagca

19

<210> 60  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 60  
cccctgattt acacagcttt ta

22

<210> 61  
<211> 26  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 61  
acaacaatgc cttcaagagc ctcttt

26

<210> 62  
<211> 22  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 62  
ccctgtgttc atctctgctt ag

22

<210> 63  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
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primer

<400> 63  
cccctgattt acacagcttt ta

22

<210> 64  
<211> 26

<212> DNA  
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       primer  
  
 <400> 64  
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 <210> 65  
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 <220>  
 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 65  
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 <210> 66  
 <211> 22  
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 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 66  
 cccctgattt acacagcttt ta 22  
  
  
 <210> 67  
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 <223> Description of Artificial Sequence:oligonucleotide  
       primer  
  
 <400> 67  
 acaacaatgc cttcaagagc ctcttt 26  
  
  
 <210> 68  
 <211> 22  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence:oligonucleotide

primer

<400> 68  
ccctgtgttc atctctgctt ag 22

<210> 69  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 69  
gtaagcggcc actcatcttt at 22

<210> 70  
<211> 26  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 70  
cagcacagtg ctcgtgtaca caagct 26

<210> 71  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 71  
gcaggcactt tgttcttgta tc 22

<210> 72  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 72  
aaggaggagc tggaggagat 20

<210> 73  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 73  
aagtcgccc acgtcttcca cgt 23

<210> 74  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 74  
atcttgtcga tggcattgaa 20

<210> 75  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 75  
gtgaaagggt gctatgcaaa 20

<210> 76  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 76  
ctgtggtttc acgccaattt cctgta 26

<210> 77  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer  
 <400> 77  
 ccacctggat tgcacatatt a 21

<210> 78  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer  
 <400> 78  
 acatcctcac ggaactcatg 20

<210> 79  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer  
 <400> 79  
 agtggctctg ctccactccc ctct 24

<210> 80  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:oligonucleotide  
 primer  
 <400> 80  
 Gly Gly Cys Ala Gly Gly Ala Cys Thr Thr Thr Cys Thr Cys Ala Thr  
 1 5 10 15  
 Cys Ala Gly Ala Gly Thr  
 20

<210> 81  
 <211> 451  
 <212> PRT  
 <213> Homo sapiens

<400> 81

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Trp	Asp	Phe	Lys	Ser	Arg	Thr	Asp	Glu	Glu	Leu	Ser	Phe	Arg	Ala	Gly
		20						25					30		
Asp	Val	Phe	His	Val	Ala	Arg	Lys	Glu	Glu	Gln	Trp	Trp	Trp	Ala	Thr
		35					40					45			
Leu	Leu	Asp	Glu	Ala	Gly	Gly	Ala	Val	Ala	Gln	Gly	Tyr	Val	Pro	His
	50					55					60				
Asn	Tyr	Leu	Ala	Glu	Arg	Glu	Thr	Val	Glu	Ser	Glu	Pro	Trp	Phe	Phe
	65				70					75					80
Gly	Cys	Ile	Ser	Arg	Ser	Glu	Ala	Val	Arg	Arg	Leu	Gln	Ala	Glu	Gly
				85					90					95	
Asn	Ala	Thr	Gly	Ala	Phe	Leu	Ile	Arg	Val	Ser	Glu	Lys	Pro	Ser	Ala
			100					105					110		
Asp	Tyr	Val	Leu	Ser	Val	Arg	Asp	Thr	Gln	Ala	Val	Arg	His	Tyr	Lys
		115					120					125			
Ile	Trp	Arg	Arg	Ala	Gly	Gly	Arg	Leu	His	Leu	Asn	Glu	Ala	Val	Ser
	130					135					140				
Phe	Leu	Ser	Leu	Pro	Glu	Leu	Val	Asn	Tyr	His	Arg	Ala	Gln	Ser	Leu
	145				150					155					160
Ser	His	Gly	Leu	Arg	Leu	Ala	Ala	Pro	Cys	Arg	Lys	His	Glu	Pro	Glu
				165					170					175	
Pro	Leu	Pro	His	Trp	Asp	Asp	Trp	Glu	Arg	Pro	Arg	Glu	Glu	Phe	Thr
			180					185					190		
Leu	Cys	Arg	Lys	Leu	Gly	Ser	Gly	Tyr	Phe	Gly	Glu	Val	Phe	Glu	Gly
		195					200					205			
Leu	Trp	Lys	Asp	Arg	Val	Gln	Val	Ala	Ile	Lys	Val	Ile	Ser	Arg	Asp
	210					215					220				
Asn	Leu	Leu	His	Gln	Gln	Met	Leu	Gln	Ser	Glu	Ile	Gln	Ala	Met	Lys
	225				230					235					240
Lys	Leu	Arg	His	Lys	His	Ile	Leu	Ala	Leu	Tyr	Ala	Val	Val	Ser	Val
				245					250					255	
Gly	Asp	Pro	Val	Tyr	Ile	Ile	Thr	Glu	Leu	Met	Ala	Lys	Gly	Ser	Leu
		260						265					270		
Leu	Glu	Leu	Leu	Arg	Asp	Ser	Asp	Glu	Lys	Val	Leu	Pro	Val	Ser	Glu
		275					280					285			
Leu	Leu	Asp	Ile	Ala	Trp	Gln	Val	Ala	Glu	Gly	Met	Cys	Tyr	Leu	Glu
	290					295					300				



Ser Gln Asn Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val  
 305 310 315 320  
 Gly Glu Asn Thr Leu Cys Lys Val Gly Asp Phe Gly Leu Ala Arg Leu  
 325 330 335  
 Ile Lys Glu Asp Val Tyr Leu Ser His Asp His Asn Ile Pro Tyr Lys  
 340 345 350  
 Trp Thr Ala Pro Glu Ala Leu Ser Arg Gly His Tyr Ser Thr Lys Ser  
 355 360 365  
 Asp Val Trp Ser Phe Gly Ile Leu Leu His Glu Met Phe Ser Arg Gly  
 370 375 380  
 Gln Val Pro Tyr Pro Gly Met Ser Asn His Glu Ala Phe Leu Arg Val  
 385 390 395 400  
 Asp Ala Gly Tyr Arg Met Pro Cys Pro Leu Glu Cys Pro Pro Ser Val  
 405 410 415  
 His Lys Leu Met Leu Thr Cys Trp Cys Arg Asp Pro Glu Gln Arg Pro  
 420 425 430  
 Cys Phe Lys Ala Leu Arg Glu Arg Leu Ser Ser Phe Thr Ser Tyr Glu  
 435 440 445  
 Asn Pro Thr  
 450

<210> 82  
 <211> 451  
 <212> PRT  
 <213> Mus musculus

<400> 82  
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 Asp Leu Leu His Val Thr Lys Lys Glu Glu Leu Trp Trp Trp Ala Thr  
 35 40 45  
 Leu Leu Asp Ala Glu Gly Lys Ala Leu Ala Glu Gly Tyr Val Pro His  
 50 55 60  
 Asn Tyr Leu Ala Glu Lys Glu Thr Val Glu Ser Glu Pro Trp Phe Phe  
 65 70 75 80  
 Gly Cys Ile Ser Arg Ser Glu Ala Met His Arg Leu Gln Ala Glu Asp  
 85 90 95  
 Asn Ser Lys Gly Ala Phe Leu Ile Arg Val Ser Gln Lys Pro Gly Ala

100						105						110					
Asp	Tyr	Val	Leu	Ser	Val	Arg	Asp	Ala	Gln	Ala	Val	Arg	His	Tyr	Arg		
		115					120						125				
Ile	Trp	Lys	Asn	Asn	Glu	Gly	Arg	Leu	His	Leu	Asn	Glu	Ala	Val	Ser		
	130						135				140						
Phe	Ser	Asn	Leu	Ser	Glu	Leu	Val	Asp	Tyr	His	Lys	Thr	Gln	Ser	Leu		
	145				150					155					160		
Ser	His	Gly	Leu	Gln	Leu	Ser	Met	Pro	Cys	Trp	Lys	His	Lys	Thr	Glu		
				165					170						175		
Pro	Leu	Pro	His	Trp	Asp	Asp	Trp	Glu	Arg	Pro	Arg	Glu	Glu	Phe	Thr		
			180						185						190		
Leu	Cys	Lys	Lys	Leu	Gly	Ala	Gly	Tyr	Phe	Gly	Glu	Val	Phe	Glu	Ala		
		195						200					205				
Leu	Trp	Lys	Gly	Gln	Val	His	Val	Ala	Val	Lys	Val	Ile	Ser	Arg	Asp		
	210						215				220						
Asn	Leu	Leu	His	Gln	His	Thr	Phe	Gln	Ala	Glu	Ile	Gln	Ala	Met	Lys		
	225				230					235					240		
Lys	Leu	Arg	His	Lys	His	Ile	Leu	Ser	Leu	Tyr	Ala	Val	Ala	Thr	Ala		
				245					250						255		
Gly	Asp	Pro	Val	Tyr	Ile	Ile	Thr	Glu	Leu	Met	Pro	Lys	Gly	Asn	Leu		
			260					265					270				
Leu	Gln	Leu	Leu	Arg	Asp	Ser	Asp	Glu	Lys	Ala	Leu	Pro	Ile	Leu	Glu		
		275					280						285				
Leu	Val	Asp	Phe	Ala	Ser	Gln	Val	Ala	Glu	Gly	Met	Cys	Tyr	Leu	Glu		
	290						295				300						
Ser	Gln	Asn	Tyr	Ile	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Val	Leu	Val		
	305				310					315					320		
Thr	Glu	Asn	Asn	Leu	Cys	Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala	Arg	Leu		
				325					330						335		
Val	Lys	Glu	Asp	Ile	Tyr	Leu	Ser	His	Glu	His	Asn	Val	Pro	Tyr	Lys		
			340					345					350				
Trp	Thr	Ala	Pro	Glu	Ala	Leu	Ser	Arg	Gly	His	Tyr	Ser	Ile	Lys	Ser		
		355					360						365				
Asp	Val	Trp	Ser	Phe	Gly	Val	Leu	Leu	His	Glu	Ile	Phe	Ser	Arg	Gly		
	370						375				380						
Gln	Met	Pro	Tyr	Pro	Gly	Met	Ser	Asn	His	Glu	Thr	Phe	Leu	Arg	Val		
	385				390					395					400		
Asp	Ala	Gly	Tyr	Arg	Met	Pro	Cys	Pro	Leu	Glu	Cys	Pro	Pro	Asn	Ile		

405										410					415						
His	Lys	Leu	Met	Leu	Ser	Cys	Trp	Ser	Arg	Asp	Pro	Lys	Gln	Arg	Pro						
			420					425					430								
Cys	Phe	Lys	Asp	Leu	Cys	Glu	Lys	Leu	Thr	Gly	Ile	Thr	Arg	Tyr	Glu						
		435					440					445									
Asn	Leu	Val																			
		450																			
<210> 83																					
<211> 221																					
<212> PRT																					
<213> Homo sapiens																					
<400> 83																					
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Ile	Leu	Ala	Leu	Tyr	Ala	Val	Val	Ser	Val	Gly	Asp	Pro	Val	Tyr	Ile						
			20					25					30								
Ile	Thr	Glu	Leu	Met	Ala	Lys	Gly	Ser	Leu	Leu	Glu	Leu	Leu	Arg	Asp						
		35					40					45									
Ser	Asp	Glu	Lys	Val	Leu	Pro	Val	Ser	Glu	Leu	Leu	Asp	Ile	Ala	Trp						
	50					55					60										
Gln	Val	Ala	Glu	Gly	Met	Cys	Tyr	Leu	Glu	Ser	Gln	Asn	Tyr	Ile	His						
65					70					75					80						
Arg	Asp	Leu	Ala	Ala	Arg	Asn	Ile	Leu	Val	Gly	Glu	Asn	Thr	Leu	Cys						
			85						90					95							
Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala	Arg	Leu	Ile	Lys	Glu	Asp	Val	Tyr						
		100						105					110								
Leu	Ser	His	Asp	His	Asn	Ile	Pro	Tyr	Lys	Trp	Thr	Ala	Pro	Glu	Ala						
		115					120					125									
Leu	Ser	Arg	Gly	His	Tyr	Ser	Thr	Lys	Ser	Asp	Val	Trp	Ser	Phe	Gly						
	130					135					140										
Ile	Leu	Leu	His	Glu	Met	Phe	Ser	Arg	Gly	Gln	Val	Pro	Tyr	Pro	Gly						
145					150					155					160						
Met	Ser	Asn	His	Glu	Ala	Phe	Leu	Arg	Val	Asp	Ala	Gly	Tyr	Arg	Met						
			165						170					175							
Pro	Cys	Pro	Leu	Glu	Cys	Pro	Pro	Ser	Val	His	Lys	Leu	Met	Leu	Thr						
		180						185					190								
Cys	Trp	Cys	Arg	Asp	Pro	Glu	Gln	Arg	Pro	Cys	Phe	Lys	Ala	Leu	Arg						
		195					200						205								

Glu Arg Leu Ser Ser Phe Thr Ser Tyr Glu Asn Pro Thr  
 210 215 220

<210> 84  
 <211> 505  
 <212> PRT  
 <213> Spongilla lacustris

<400> 84  
 Met Gly Ser Cys Cys Ser Ser Gln Asp Gly Asp Gly Asn Gly Lys Ala  
 1 5 10 15  
 Thr Ala Gly Ser Thr Val Asp Ser His Glu Leu Ser Gln Ser Val Lys  
 20 25 30  
 Gly Lys Ile Lys Gln Pro Glu Pro Lys Pro Lys Pro Pro Gln Val  
 35 40 45  
 Pro Pro Ala Gln Asp Val Lys Tyr Pro Ile Tyr Val Gly Lys Tyr Asp  
 50 55 60  
 Tyr Asp Ser Arg Thr Asp Asp Asp Leu Ser Phe Lys Lys Gly Asp Leu  
 65 70 75 80  
 Met Tyr Ile Ile Ser Thr Asp Glu Gly Asp Trp Trp Phe Ala Arg Ser  
 85 90 95  
 Lys Asp Thr Ala Gly Lys Glu Gly Tyr Ile Pro Ser Asn Tyr Val Ala  
 100 105 110  
 Glu Tyr Lys Ser Leu Asp Ala Glu Glu Trp Phe Leu Gly Lys Ile Lys  
 115 120 125  
 Arg Val Glu Ala Glu Lys Met Leu Asn Gln Ser Phe Asn Gln Val Gly  
 130 135 140  
 Ser Phe Leu Ile Arg Asp Ser Glu Thr Thr Pro Gly Asp Phe Ser Leu  
 145 150 155 160  
 Ser Val Lys Asp Gln Asp Arg Val Arg His Tyr Arg Val Arg Arg Leu  
 165 170 175  
 Glu Asp Gly Ser Leu Phe Val Thr Arg Arg Ser Thr Phe Gln Ile Leu  
 180 185 190  
 His Glu Leu Val Asp His Tyr Lys Ile Glu Thr Asp Gly Leu Cys Cys  
 195 200 205  
 Lys Leu Leu Tyr Pro Cys Leu Gln Ala Glu Lys Pro Gln Thr Ala Gly  
 210 215 220  
 Leu Leu Arg Gln Ala Asn Glu Glu Trp Glu Ile Glu Lys Thr Gln Ile  
 225 230 235 240  
 Lys Leu Leu Arg Arg Leu Gly Ala Gly Gln Phe Gly Glu Val Trp Glu  
 245 250 255

Gly Leu Trp Asn Gly Thr Thr Ser Val Ala Val Lys Thr Leu Lys Pro  
 260 265 270  
 Gly Thr Met Ser Val Glu Glu Phe Leu Gln Glu Ala Ser Ile Met Lys  
 275 280 285  
 Arg Leu Arg His Pro Lys Leu Ile Gln Leu Tyr Ala Val Cys Thr Lys  
 290 295 300  
 Glu Glu Pro Ile Tyr Ile Val Thr Glu Leu Met Lys Tyr Gly Ser Leu  
 305 310 315 320  
 Leu Glu Tyr Leu Arg Gly Glu Asp Gly Val Leu Lys Ile Glu Gln Leu  
 325 330 335  
 Val Asp Val Ala Ala Gln Val Ala Ser Gly Met Ser Tyr Leu Glu Gln  
 340 345 350  
 Gln Asn Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Gly  
 355 360 365  
 Glu His Gly Ile Cys Lys Val Ala Asp Phe Gly Leu Ala Arg Val Ile  
 370 375 380  
 Asp Glu Glu Ile Tyr Glu Ala His Thr Gly Ala Lys Phe Pro Ile Lys  
 385 390 395 400  
 Trp Thr Ala Pro Glu Ala Ala Met Tyr Asn Arg Phe Thr Ile Lys Ser  
 405 410 415  
 Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Ile Ile Thr Tyr Gly  
 420 425 430  
 Arg Phe Pro Tyr Pro Gly Met Thr Asn Pro Glu Val Leu Glu Lys Ile  
 435 440 445  
 Gln Gln Asn Tyr Arg Met Pro Cys Pro Ala Asn Cys Pro Lys Gln Phe  
 450 455 460  
 His Asp Ile Met Leu Asp Cys Trp Arg Glu Asp Pro Ala Ser Arg Pro  
 465 470 475 480  
 Thr Phe Glu Thr Leu Gln Trp Gln Leu Glu Glu Phe Phe Asn Ser Glu  
 485 490 495  
 Gly Tyr Arg Asp Pro Asp Ala Ile His  
 500 505

<210> 85

<211> 537

<212> PRT

<213> Xiphophorus helleri

<400> 85

Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Asp

1	5	10	15
Asp Arg Asp Ala Ser Ile Ser Gln Gly Ala Gly Tyr Arg Tyr Gly Ala	20	25	30
Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ala Ile Pro	35	40	45
Asn Tyr Asn Asn Phe His Ala Pro Val Gly Gln Gly Val Thr Val Phe	50	55	60
Gly Gly Val Asn Thr Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly	65	70	75
Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg	85	90	95
Thr Glu Asp Asp Leu Ser Phe Arg Lys Gly Glu Arg Phe Gln Ile Leu	100	105	110
Asn Ser Thr Glu Gly Asp Trp Trp Asp Ala Arg Ser Leu Thr Thr Gly	115	120	125
Gly Ser Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile	130	135	140
Gln Ala Glu Asp Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu	145	150	155
Arg Gln Leu Leu Ser Thr Gly Asn Pro Arg Gly Thr Tyr Leu Ile Arg	165	170	175
Glu Ser Glu Thr Thr Lys Gly Ala Phe Ser Leu Ser Ile Arg Asp Trp	180	185	190
Asp Asp Glu Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu	195	200	205
Asp Ser Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Asp Thr Leu	210	215	220
Gln Gln Leu Val Gln His Tyr Ser Asp Arg Ala Ala Gly Leu Cys Cys	225	230	235
Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Ala Asp Leu	245	250	255
Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln	260	265	270
Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly	275	280	285
Thr Trp Asn Gly Thr Thr Lys Val Ala Val Lys Thr Leu Lys Pro Gly	290	295	300
Thr Met Ser Pro Glu Ser Phe Leu Glu Glu Ala Gln Ile Met Lys Lys			

305		310		315		320
Leu Arg His Asp Lys	Leu Val Gln Leu Tyr	Ala Val Val Ser	Glu Glu			
	325		330			335
Pro Ile Tyr Ile Val Thr Glu Tyr Met Ser Lys Gly Ser Leu Leu Asp						
	340		345			350
Phe Leu Lys Asp Gly Glu Gly Arg Ala Leu Lys Leu Pro Asn Leu Val						
	355		360			365
Asp Met Ala Ala Gln Val Ala Ala Gly Met Ala Tyr Ile Glu Arg Met						
	370		375			380
Asn Tyr Ile His Arg Asp Leu Arg Ser Ala Asn Ile Leu Val Gly Asp						
	385		390			400
Asn Leu Val Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu						
	405		410			415
Asp Asn Glu Tyr Thr Ala Arg Gln Gly Ala Lys Phe Pro Ile Lys Trp						
	420		425			430
Thr Ala Pro Glu Ala Ala Leu Tyr Gly Arg Phe Thr Ile Lys Ser Asp						
	435		440			445
Val Trp Ser Phe Gly Ile Leu Leu Thr Glu Leu Val Thr Lys Gly Arg						
	450		455			460
Val Pro Tyr Pro Gly Met Asn Asn Arg Glu Val Leu Glu Gln Val Glu						
	465		470			480
Arg Gly Tyr Arg Met Pro Cys Pro Gln Asp Cys Pro Ala Ser Leu His						
	485		490			495
Glu Leu Met Leu Gln Cys Trp Lys Lys Asp Pro Glu Glu Arg Pro Thr						
	500		505			510
Phe Glu Tyr Leu Gln Ala Phe Leu Glu Asp Tyr Phe Thr Ala Thr Glu						
	515		520			525
Pro Gln Tyr Gln Pro Gly Asp Asn Leu						
	530		535			

<210> 86  
 <211> 534  
 <212> PRT  
 <213> Homo sapiens

<400> 86														
Met Ile Ala Arg Gln Gln Cys Val Arg Gly Gly Pro Arg Gly Phe Ser														
1			5				10						15	
Cys Gly Ser Ala Ile Val Gly Gly Gly Lys Arg Gly Ala Phe Ser Ser														
		20				25						30		

Val Ser Met Ser Gly Gly Ala Gly Arg Cys Ser Ser Gly Gly Phe Gly  
 35 40 45  
 Ser Arg Ser Leu Tyr Asn Leu Arg Gly Asn Lys Ser Ile Ser Met Ser  
 50 55 60  
 Val Ala Gly Ser Arg Gln Gly Ala Cys Phe Gly Gly Ala Gly Gly Phe  
 65 70 75 80  
 Gly Thr Gly Gly Phe Gly Ala Gly Gly Phe Gly Ala Gly Phe Gly Thr  
 85 90 95  
 Gly Gly Phe Gly Gly Gly Phe Gly Gly Ser Phe Ser Gly Lys Gly Gly  
 100 105 110  
 Pro Gly Phe Pro Val Leu Pro Ala Gly Gly Ile Gln Glu Val Thr Leu  
 115 120 125  
 Asn Gln Ser Leu Leu Thr Pro Leu His Val Glu Ile Asp Pro Glu Ile  
 130 135 140  
 Gln Lys Val Arg Thr Glu Glu Arg Glu Gln Ile Lys Leu Leu Asn Asn  
 145 150 155 160  
 Lys Phe Ala Ser Phe Ile Asp Lys Val Gln Phe Leu Glu Gln Gln Asn  
 165 170 175  
 Lys Val Leu Glu Thr Lys Trp Asn Leu Leu Gln Gln Gln Thr Thr Thr  
 180 185 190  
 Thr Ser Ser Lys Asn Leu Glu Pro Leu Phe Glu Thr Tyr Leu Ser Val  
 195 200 205  
 Leu Arg Lys Gln Leu Asp Thr Leu Gly Asn Asp Lys Gly Arg Leu Gln  
 210 215 220  
 Ser Glu Leu Lys Thr Met Gln Asp Ser Val Glu Asp Phe Lys Thr Lys  
 225 230 235 240  
 Tyr Glu Glu Glu Ile Asn Lys Arg Thr Ala Ala Glu Asn Asp Phe Val  
 245 250 255  
 Val Leu Lys Lys Asp Val Asp Ala Ala Tyr Leu Asn Lys Val Glu Leu  
 260 265 270  
 Glu Ala Lys Val Asp Ser Leu Asn Asp Glu Ile Asn Phe Leu Lys Val  
 275 280 285  
 Leu Tyr Asp Ala Glu Leu Ser Gln Met Gln Thr His Val Ser Asp Thr  
 290 295 300  
 Ser Val Val Leu Ser Met Asp Asn Asn Arg Asn Leu Asp Leu Asp Ser  
 305 310 315 320  
 Ile Ile Ala Glu Val Arg Ala Gln Tyr Glu Glu Ile Ala Gln Arg Ser  
 325 330 335



Lys Ala Glu Ala Glu Ala Leu Tyr Gln Thr Lys Val Gln Gln Leu Gln  
 340 345 350  
 Ile Ser Val Asp Gln His Gly Asp Asn Leu Lys Asn Thr Lys Ser Glu  
 355 360 365  
 Ile Ala Glu Leu Asn Arg Met Ile Gln Arg Leu Arg Ala Glu Ile Glu  
 370 375 380  
 Asn Ile Lys Lys Gln Cys Gln Thr Leu Gln Val Ser Val Ala Asp Ala  
 385 390 395 400  
 Glu Gln Arg Gly Glu Asn Ala Leu Lys Asp Ala His Ser Lys Arg Val  
 405 410 415  
 Glu Leu Glu Ala Ala Leu Gln Gln Ala Lys Glu Glu Leu Ala Arg Met  
 420 425 430  
 Leu Arg Glu Tyr Gln Glu Leu Met Ser Val Lys Leu Ala Leu Asp Ile  
 435 440 445  
 Glu Ile Ala Thr Tyr Arg Lys Leu Leu Glu Gly Glu Glu Tyr Arg Met  
 450 455 460  
 Ser Gly Glu Cys Gln Ser Ala Val Ser Ile Ser Val Val Ser Gly Ser  
 465 470 475 480  
 Thr Ser Thr Gly Gly Ile Ser Gly Gly Leu Gly Ser Gly Ser Gly Phe  
 485 490 495  
 Gly Leu Ser Ser Gly Phe Gly Ser Gly Ser Gly Ser Gly Phe Gly Phe  
 500 505 510  
 Gly Gly Ser Val Ser Gly Ser Ser Ser Lys Ile Ile Ser Thr Thr  
 515 520 525  
 Thr Leu Asn Lys Arg Arg  
 530

<210> 87  
 <211> 534  
 <212> PRT  
 <213> Homo sapiens

<400> 87  
 Met Ile Ala Arg Gln Gln Cys Val Arg Gly Gly Pro Arg Gly Phe Ser  
 1 5 10 15  
 Cys Gly Ser Ala Ile Val Gly Gly Gly Lys Arg Gly Ala Phe Ser Ser  
 20 25 30  
 Val Ser Met Ser Gly Gly Ala Gly Arg Cys Ser Ser Gly Gly Phe Gly  
 35 40 45  
 Ser Arg Ser Leu Tyr Asn Leu Arg Gly Asn Lys Ser Ile Ser Met Ser  
 50 55 60

Val	Ala	Gly	Ser	Arg	Gln	Gly	Ala	Cys	Phe	Gly	Gly	Ala	Gly	Gly	Phe	
65					70					75					80	
Gly	Thr	Gly	Gly	Phe	Gly	Ala	Gly	Gly	Phe	Gly	Ala	Gly	Phe	Gly	Thr	
				85					90					95		
Gly	Gly	Phe	Gly	Gly	Gly	Phe	Gly	Gly	Ser	Phe	Ser	Gly	Lys	Gly	Gly	
			100					105					110			
Pro	Gly	Phe	Pro	Val	Leu	Pro	Ala	Gly	Gly	Ile	Gln	Glu	Val	Thr	Ile	
		115					120					125				
Asn	Gln	Ser	Leu	Leu	Thr	Pro	Leu	His	Val	Glu	Ile	Asp	Pro	Glu	Ile	
		130				135					140					
Gln	Lys	Val	Arg	Thr	Glu	Glu	Arg	Glu	Gln	Ile	Lys	Leu	Leu	Asn	Asn	
145					150					155					160	
Lys	Phe	Ala	Ser	Phe	Ile	Asp	Lys	Val	Gln	Phe	Leu	Glu	Gln	Gln	Asn	
				165					170					175		
Lys	Val	Leu	Glu	Thr	Lys	Trp	Asn	Leu	Leu	Gln	Gln	Gln	Thr	Thr	Thr	
			180					185					190			
Thr	Ser	Ser	Lys	Asn	Leu	Glu	Pro	Leu	Phe	Glu	Thr	Tyr	Leu	Ser	Val	
		195					200					205				
Leu	Arg	Lys	Gln	Leu	Asp	Thr	Leu	Gly	Asn	Asp	Lys	Gly	Arg	Leu	Gln	
	210					215					220					
Ser	Glu	Leu	Lys	Thr	Met	Gln	Asp	Ser	Val	Glu	Asp	Phe	Lys	Thr	Lys	
225					230					235					240	
Tyr	Glu	Glu	Glu	Ile	Asn	Lys	Arg	Thr	Ala	Ala	Glu	Asn	Asp	Phe	Val	
				245					250					255		
Val	Leu	Lys	Lys	Asp	Val	Asp	Ala	Ala	Tyr	Leu	Asn	Lys	Val	Glu	Leu	
			260					265					270			
Glu	Ala	Lys	Val	Asp	Ser	Leu	Asn	Asp	Glu	Ile	Asn	Phe	Leu	Lys	Val	
		275					280					285				
Leu	Tyr	Asp	Ala	Glu	Leu	Ser	Gln	Met	Gln	Thr	His	Val	Ser	Asp	Thr	
	290					295					300					
Ser	Val	Val	Leu	Ser	Met	Asp	Asn	Asn	Arg	Asn	Leu	Asp	Leu	Asp	Ser	
305					310				315						320	
Ile	Ile	Ala	Glu	Val	Arg	Ala	Gln	Tyr	Glu	Glu	Ile	Ala	Gln	Arg	Ser	
				325					330					335		
Lys	Ala	Glu	Ala	Glu	Ala	Leu	Tyr	Gln	Thr	Lys	Val	Gln	Gln	Leu	Gln	
			340					345					350			
Ile	Ser	Val	Asp	Gln	His	Gly	Asp	Asn	Leu	Lys	Asn	Thr	Lys	Ser	Glu	
		355					360					365				

Ile Ala Glu Leu Asn Arg Met Ile Gln Arg Leu Arg Ala Glu Ile Glu  
 370 375 380  
 Asn Ile Lys Lys Gln Cys Gln Thr Leu Gln Val Ser Val Ala Asp Ala  
 385 390 395 400  
 Glu Gln Arg Gly Glu Asn Ala Leu Lys Asp Ala His Ser Lys Arg Val  
 405 410 415  
 Glu Leu Glu Ala Ala Leu Gln Gln Ala Lys Glu Glu Leu Ala Arg Met  
 420 425 430  
 Leu Arg Glu Tyr Gln Glu Leu Met Ser Val Lys Leu Ala Leu Asp Ile  
 435 440 445  
 Glu Ile Ala Thr Tyr Arg Lys Leu Leu Glu Gly Glu Glu Tyr Arg Met  
 450 455 460  
 Ser Gly Glu Cys Gln Ser Ala Val Ser Ile Ser Val Val Ser Gly Ser  
 465 470 475 480  
 Thr Ser Thr Gly Gly Ile Ser Gly Gly Leu Gly Ser Gly Ser Gly Phe  
 485 490 495  
 Gly Leu Ser Ser Gly Phe Gly Ser Gly Ser Gly Ser Gly Phe Gly Phe  
 500 505 510  
 Gly Gly Ser Val Ser Gly Ser Ser Ser Ser Lys Ile Ile Gly Thr Thr  
 515 520 525  
 Thr Leu Asn Lys Arg Arg  
 530

<210> 88  
 <211> 524  
 <212> PRT  
 <213> Homo sapiens

<400> 88  
 Met Ile Ala Arg Gln Ser Ser Val Arg Gly Ala Ser Pro Gly Phe Thr  
 1 5 10 15  
 Ser Gly Ser Ala Ile Ala Gly Gly Val Lys Arg Val Ala Phe Ser Ser  
 20 25 30  
 Gly Ser Met Ser Gly Gly Ala Gly Arg Cys Ser Ser Gly Gly Phe Gly  
 35 40 45  
 Ser Arg Ser Leu Tyr Asn Leu Gly Gly His Lys Ser Ile Ser Met Ser  
 50 55 60  
 Val Ala Gly Ser Cys Gln Gly Gly Gly Tyr Gly Gly Ala Gly Gly Phe  
 65 70 75 80  
 Gly Val Gly Gly Tyr Gly Ala Gly Phe Gly Ala Gly Gly Phe Gly Gly

85										90					95						
Gly	Phe	Gly	Gly	Ser	Phe	Asn	Gly	Arg	Gly	Gly	Pro	Gly	Phe	Pro	Val						
			100					105					110								
Cys	Pro	Ala	Gly	Gly	Ile	Gln	Glu	Val	Thr	Ile	Asn	Gln	Ser	Leu	Leu						
		115					120					125									
Thr	Pro	Leu	Gln	Val	Glu	Ile	Asp	Pro	Glu	Ile	Gln	Lys	Ile	Arg	Thr						
		130				135					140										
Ala	Glu	Arg	Glu	Gln	Ile	Lys	Thr	Leu	Asn	Asn	Lys	Phe	Ala	Ser	Phe						
		145			150					155					160						
Ile	Asp	Lys	Val	Arg	Phe	Leu	Glu	Gln	Gln	Asn	Lys	Val	Leu	Glu	Thr						
				165					170					175							
Lys	Trp	Asn	Leu	Leu	Gln	Gln	Gln	Thr	Thr	Thr	Thr	Ser	Pro	Lys	Ser						
			180					185					190								
Leu	Asp	Pro	Phe	Phe	Glu	Thr	Tyr	Ile	Asn	Ala	Leu	Arg	Lys	Asn	Leu						
		195					200					205									
Asp	Thr	Leu	Ser	Asn	Asp	Lys	Gly	Arg	Leu	Gln	Ser	Glu	Leu	Lys	Met						
		210				215					220										
Met	Gln	Asp	Ser	Val	Glu	Asp	Phe	Lys	Thr	Lys	Tyr	Glu	Glu	Glu	Ile						
		225			230					235					240						
Asn	Lys	Arg	Thr	Ala	Ala	Glu	Asn	Asp	Phe	Val	Val	Leu	Lys	Lys	Asp						
				245					250					255							
Val	Asp	Ala	Ala	Tyr	Met	Ile	Lys	Val	Glu	Leu	Glu	Ala	Lys	Met	Glu						
			260					265					270								
Ser	Leu	Lys	Asp	Glu	Ile	Asn	Phe	Thr	Arg	Val	Leu	Tyr	Glu	Ala	Glu						
		275					280					285									
Leu	Ala	Gln	Met	Gln	Thr	His	Val	Ser	Asp	Thr	Ser	Val	Val	Leu	Ser						
		290				295					300										
Met	Asp	Asn	Asn	Arg	Asn	Leu	Asp	Leu	Asp	Gly	Ile	Ile	Ala	Glu	Val						
		305			310					315					320						
Arg	Ala	Gln	Tyr	Glu	Asp	Ile	Ala	Arg	Lys	Ser	Lys	Ala	Glu	Val	Glu						
			325						330					335							
Ser	Trp	Tyr	Gln	Ile	Lys	Val	Gln	Gln	Leu	Gln	Met	Ser	Ala	Asp	Gln						
			340					345					350								
His	Gly	Asp	Ser	Leu	Lys	Thr	Thr	Lys	Asn	Glu	Ile	Ser	Glu	Leu	Asn						
		355				360						365									
Arg	Met	Ile	Gln	Arg	Leu	Arg	Ala	Glu	Ile	Glu	Asn	Ile	Lys	Lys	Gln						
		370				375					380										
Ser	Gln	Thr	Pro	Gln	Ala	Ser	Val	Ala	Asp	Ala	Glu	Gln	Arg	Gly	Glu						

385		390		395		400
Leu Ala Leu Lys Asp	Ala Tyr Ser Lys Arg	Ala Glu Leu Glu Thr	Ala			
	405		410		415	
Leu Gln Lys Ala Lys Glu Asp	Leu Ala Arg Leu Leu Arg Asp	Tyr Gln				
	420		425		430	
Ala Leu Met Asn Val Lys Leu Ala Leu Asp	Val Glu Ile Ala Thr Tyr					
	435		440		445	
Arg Lys Leu Leu Glu Gly Glu Glu Cys Arg Met	Ser Gly Glu Cys Lys					
	450		455		460	
Ser Ala Val Ser Ile Ser Val Val Gly Gly Ser	Gln His Trp Arg Ser					
	465		470		475	480
Gly Leu Gly Leu Gly Ser Gly Phe Cys Ser Gly Ser Gly Ser Gly Ser						
	485		490		495	
Gly Phe Gly Phe Gly Gly Gly Ile Tyr Gly Gly Ser Gly Ser Lys Ile						
	500		505		510	
Thr Ser Ser Ala Thr Ile Thr Lys Arg Ser Pro Arg						
	515		520			

<210> 89  
 <211> 551  
 <212> PRT  
 <213> Mus musculus

<400> 89

Met Ser Arg Gln Ser Ser Ile Thr Phe Gln Ser Gly Ser Arg Arg Gly														
1			5				10						15	
Phe Ser Thr Thr Ser Ala Ile Thr Pro Ala Ala Gly Arg Ser Arg Phe														
			20				25					30		
Ser Ser Val Ser Val Ala Arg Ser Ala Ala Gly Ser Gly Gly Leu Gly														
			35				40					45		
Arg Ile Ser Ser Ala Gly Ala Ser Phe Gly Ser Arg Ser Leu Tyr Asn														
			50				55				60			
Leu Gly Gly Ala Lys Arg Val Ser Ile Asn Gly Cys Gly Ser Ser Cys														
			65				70				75			80
Arg Ser Gly Phe Gly Gly Arg Ala Ser Asn Gly Phe Gly Val Asn Ser														
			85				90						95	
Gly Phe Gly Tyr Gly Gly Gly Val Gly Gly Gly Phe Ser Gly Pro Ser														
			100				105						110	
Phe Pro Val Cys Pro Pro Gly Gly Ile Gln Glu Val Thr Val Asn Gln														
			115				120						125	

Ser	Leu	Leu	Thr	Pro	Leu	His	Leu	Gln	Ile	Asp	Pro	Thr	Ile	Gln	Arg	130	135	140	
Val	Arg	Ala	Glu	Glu	Arg	Glu	Gln	Ile	Lys	Thr	Leu	Asn	Asn	Lys	Phe	145	150	155	160
Ala	Ser	Phe	Ile	Asp	Lys	Val	Arg	Phe	Leu	Glu	Gln	Gln	Asn	Lys	Val	165	170	175	
Leu	Glu	Thr	Lys	Trp	Ala	Leu	Leu	Gln	Glu	Gln	Gly	Ser	Arg	Thr	Val	180	185	190	
Arg	Gln	Asn	Leu	Glu	Pro	Leu	Phe	Asp	Ser	Tyr	Thr	Ser	Glu	Leu	Arg	195	200	205	
Arg	Gln	Leu	Glu	Ser	Ile	Thr	Thr	Glu	Arg	Gly	Arg	Leu	Glu	Ala	Glu	210	215	220	
Leu	Arg	Asn	Met	Gln	Asp	Val	Val	Glu	Asp	Phe	Lys	Val	Arg	Tyr	Glu	225	230	235	240
Asp	Glu	Ile	Asn	Lys	Arg	Thr	Ala	Ala	Glu	Asn	Glu	Phe	Val	Ala	Leu	245	250	255	
Lys	Lys	Asp	Val	Asp	Ala	Ala	Tyr	Met	Asn	Lys	Val	Glu	Leu	Glu	Ala	260	265	270	
Lys	Val	Lys	Ser	Leu	Pro	Glu	Glu	Ile	Asn	Phe	Ile	His	Ser	Val	Phe	275	280	285	
Asp	Ala	Glu	Leu	Ser	Gln	Leu	Gln	Thr	Gln	Val	Gly	Asp	Thr	Ser	Val	290	295	300	
Val	Leu	Ser	Met	Asp	Asn	Asn	Arg	Asn	Leu	Asp	Leu	Asp	Ser	Ile	Ile	305	310	315	320
Ala	Glu	Val	Lys	Ala	Gln	Tyr	Glu	Asp	Ile	Ala	Asn	Arg	Ser	Arg	Ala	325	330	335	
Glu	Ala	Glu	Ser	Trp	Tyr	Gln	Thr	Lys	Tyr	Glu	Glu	Leu	Gln	Val	Thr	340	345	350	
Ala	Gly	Arg	His	Gly	Asp	Asp	Leu	Arg	Asn	Thr	Lys	Gln	Glu	Ile	Ser	355	360	365	
Glu	Met	Asn	Arg	Met	Ile	Gln	Arg	Leu	Arg	Ala	Glu	Ile	Asp	Ser	Val	370	375	380	
Lys	Lys	Gln	Cys	Ser	Ser	Leu	Gln	Thr	Ala	Ile	Ala	Asp	Ala	Glu	Gln	385	390	395	400
Arg	Gly	Glu	Leu	Ala	Leu	Lys	Asp	Ala	Arg	Ala	Lys	Leu	Val	Asp	Leu	405	410	415	
Glu	Glu	Ala	Leu	Gln	Lys	Ala	Lys	Gln	Asp	Met	Ala	Arg	Leu	Leu	Arg	420	425	430	

Glu Tyr Gln Glu Leu Met Asn Ile Lys Leu Ala Leu Asp Val Glu Ile  
           435                          440                          445  
 Ala Thr Tyr Arg Lys Leu Leu Glu Gly Glu Glu Cys Arg Leu Ser Gly  
           450                          455                          460  
 Glu Gly Val Ser Pro Val Asn Ile Ser Val Val Thr Ser Thr Leu Ser  
   465                          470                          475                          480  
 Ser Gly Tyr Gly Arg Gly Ser Ser Ile Gly Gly Gly Asn Leu Gly Leu  
                           485                          490                          495  
 Gly Gly Gly Ser Gly Tyr Ser Phe Thr Thr Ser Gly Gly His Ser Leu  
                           500                          505                          510  
 Gly Ala Gly Leu Gly Gly Ser Gly Phe Ser Ala Thr Ser Asn Arg Gly  
           515                          520                          525  
 Leu Gly Gly Ser Gly Ser Ser Val Lys Phe Val Ser Thr Thr Ser Ser  
   530                          535                          540  
 Ser Gln Lys Ser Tyr Thr His  
   545                          550

<210> 90  
 <211> 551  
 <212> PRT  
 <213> Homo sapiens

<400> 90  
 Met Ser Arg Gln Ser Ser Ile Thr Phe Gln Ser Gly Ser Arg Arg Gly  
   1                          5                          10                          15  
 Phe Ser Thr Thr Ser Ala Ile Thr Pro Ala Ala Gly Arg Ser Arg Phe  
           20                          25                          30  
 Ser Ser Val Ser Val Ala Arg Ser Ala Ala Gly Ser Gly Gly Leu Gly  
   35                          40                          45  
 Arg Ile Ser Ser Ala Gly Ala Ser Phe Gly Ser Arg Ser Leu Tyr Asn  
   50                          55                          60  
 Leu Gly Gly Ala Lys Arg Val Ser Ile Asn Gly Cys Gly Ser Ser Cys  
   65                          70                          75                          80  
 Arg Ser Gly Phe Gly Gly Arg Ala Ser Asn Gly Phe Gly Val Asn Ser  
           85                          90                          95  
 Gly Phe Gly Tyr Gly Gly Gly Val Gly Gly Gly Phe Ser Gly Pro Ser  
           100                          105                          110  
 Phe Pro Val Cys Pro Pro Gly Gly Ile Gln Glu Val Thr Val Asn Gln  
   115                          120                          125  
 Ser Leu Leu Thr Pro Leu His Leu Gln Ile Asp Pro Thr Ile Gln Arg  
   130                          135                          140

Val Arg Ala Glu Glu Arg Glu Gln Ile Lys Thr Leu Asn Asn Lys Phe  
145 150 155 160  
Ala Ser Phe Ile Asp Lys Val Arg Phe Leu Glu Gln Gln Asn Lys Val  
165 170 175  
Leu Glu Thr Lys Trp Ala Leu Leu Gln Glu Gln Gly Ser Arg Thr Val  
180 185 190  
Arg Gln Asn Leu Glu Pro Leu Phe Asp Ser Tyr Thr Ser Glu Leu Arg  
195 200 205  
Arg Gln Leu Glu Ser Ile Thr Thr Glu Arg Gly Arg Leu Glu Ala Glu  
210 215 220  
Leu Arg Asn Met Gln Asp Val Val Glu Asp Phe Lys Val Arg Tyr Glu  
225 230 235 240  
Asp Glu Ile Asn Lys Arg Thr Ala Ala Glu Asn Glu Phe Val Ala Leu  
245 250 255  
Lys Lys Asp Val Asp Ala Ala Tyr Met Asn Lys Val Glu Leu Glu Ala  
260 265 270  
Lys Val Lys Ser Leu Pro Glu Glu Ile Asn Phe Ser His Ser Val Phe  
275 280 285  
Asp Ala Glu Leu Ser Gln Leu Gln Thr Gln Val Gly Asp Thr Ser Val  
290 295 300  
Val Leu Ser Met Asp Asn Asn Arg Asn Leu Asp Leu Asp Ser Ile Ile  
305 310 315 320  
Ala Glu Val Lys Ala Gln Tyr Glu Asp Ile Ala Asn Arg Ser Arg Ala  
325 330 335  
Glu Ala Glu Ser Trp Tyr Gln Thr Lys Tyr Glu Glu Leu Gln Val Thr  
340 345 350  
Ala Gly Arg His Gly Asp Asp Leu Arg Asn Thr Lys Gln Glu Ile Ser  
355 360 365  
Glu Met Asn Arg Met Ile Gln Arg Leu Arg Ala Glu Ile Asp Ser Val  
370 375 380  
Lys Lys Gln Cys Ser Ser Leu Gln Thr Ala Ile Ala Asp Ala Glu Gln  
385 390 395 400  
Arg Gly Glu Leu Ala Leu Lys Asp Ala Arg Ala Lys Leu Val Asp Leu  
405 410 415  
Glu Glu Ala Leu Gln Lys Ala Lys Gln Asp Met Ala Arg Leu Leu Arg  
420 425 430  
Glu Tyr Gln Glu Leu Met Asn Ile Lys Leu Ala Leu Asp Val Glu Ile  
435 440 445



Ala Thr Tyr Arg Lys Leu Leu Glu Gly Glu Glu Cys Arg Leu Ser Gly  
450 455 460

Glu Gly Val Ser Pro Val Asn Ile Ser Val Val Thr Ser Thr Leu Ser  
465 470 475 480

Ser Gly Tyr Gly Arg Gly Ser Ser Ile Gly Gly Gly Asn Leu Gly Leu  
485 490 495

Gly Gly Gly Ser Gly Tyr Ser Phe Thr Thr Ser Gly Gly His Ser Leu  
500 505 510

Gly Ala Gly Leu Gly Gly Ser Gly Phe Ser Ala Thr Ser Asn Arg Gly  
515 520 525

Leu Gly Gly Ser Gly Ser Ser Val Lys Phe Val Ser Thr Thr Ser Ser  
530 535 540

Ser Gln Lys Ser Tyr Thr His  
545 550

<210> 91

<211> 599

<212> PRT

<213> Homo sapiens

<400> 91

Val Arg Asp Lys Thr Glu Glu Ser Cys Pro Ile Leu Arg Ile Glu Gly  
1 5 10 15

His Gln Leu Thr Tyr Asp Asn Ile Asn Lys Leu Glu Val Ser Gly Phe  
20 25 30

Asp Leu Gly Asp Ser Phe Ser Leu Arg Arg Ala Phe Cys Glu Ser Asp  
35 40 45

Lys Thr Cys Phe Lys Leu Gly Ser Ala Leu Leu Ile Arg Asp Thr Ile  
50 55 60

Lys Ile Phe Pro Lys Gly Leu Pro Glu Glu Tyr Ser Val Ala Ala Met  
65 70 75 80

Phe Arg Val Arg Arg Asn Ala Lys Lys Glu Arg Trp Phe Leu Trp Gln  
85 90 95

Val Leu Asn Gln Gln Asn Ile Pro Gln Ile Ser Ile Val Val Asp Gly  
100 105 110

Gly Lys Lys Val Val Glu Phe Met Phe Gln Ala Thr Glu Gly Asp Val  
115 120 125

Leu Asn Tyr Ile Phe Arg Asn Arg Glu Leu Arg Pro Leu Phe Asp Arg  
130 135 140

Gln Trp His Lys Leu Gly Ile Ser Ile Gln Ser Gln Val Ile Ser Leu

145		150		155		160
Tyr Met Asp Cys	Asn Leu Ile Ala Arg Arg Gln Thr Asp Glu Lys Asp					
	165			170		175
Thr Val Asp Phe His Gly Arg Thr Val Ile Ala Thr Arg Ala Ser Asp						
	180			185		190
Gly Lys Pro Val Asp Ile Glu Leu His Gln Leu Lys Ile Tyr Cys Ser						
	195			200		205
Ala Asn Leu Ile Ala Gln Glu Thr Cys Cys Glu Ile Ser Asp Thr Lys						
	210			215		220
Cys Pro Glu Gln Asp Gly Phe Gly Asn Ile Ala Ser Ser Trp Val Thr						
	225			230		235
Ala His Ala Ser Lys Met Ser Ser Tyr Leu Pro Ala Lys Gln Glu Leu						
	245			250		255
Lys Asp Gln Cys Gln Cys Ile Pro Asn Lys Gly Glu Ala Gly Leu Pro						
	260			265		270
Gly Ala Pro Gly Ser Pro Gly Gln Lys Gly His Lys Gly Glu Pro Gly						
	275			280		285
Glu Asn Gly Leu His Gly Ala Pro Gly Phe Pro Gly Gln Lys Gly Glu						
	290			295		300
Gln Gly Phe Glu Gly Ser Lys Gly Glu Thr Gly Glu Lys Gly Glu Gln						
	305			310		315
Gly Glu Lys Gly Asp Pro Ala Leu Gly Cys Leu Asn Gly Glu Asn Gly						
	325			330		335
Leu Lys Gly Val Leu Gly Pro His Gly Pro Pro Gly Pro Lys Gly Glu						
	340			345		350
Lys Gly Asp Thr Gly Pro Pro Gly Pro Pro Ala Leu Pro Gly Ser Leu						
	355			360		365
Gly Ile Gln Gly Pro Gln Gly Pro Pro Gly Lys Glu Gly Gln Arg Gly						
	370			375		380
Arg Arg Gly Lys Thr Gly Pro Pro Gly Lys Pro Gly Pro Pro Gly Pro						
	385			390		395
Pro Gly Pro Pro Gly Ile Gln Gly Ile His Gln Thr Leu Gly Gly Asp						
	405			410		415
Asp Asn Lys Asp Asn Lys Gly Asn Asp Glu His Glu Ala Gly Gly Leu						
	420			425		430
Lys Gly Asp Lys Gly Glu Thr Gly Leu Pro Gly Phe Pro Gly Ser Val						
	435			440		445
Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Glu Pro Phe Thr Lys Gly						

450	455	460
Glu Lys Gly Asp Arg Gly	Glu Pro Gly Val Ile Gly Ser Gln Gly Val	
465	470	475 480
Lys Gly Glu Pro Gly Asp Pro Gly Pro Pro Gly Leu Ile Gly Ser Pro		
	485 490	495
Gly Leu Lys Gly Gln Gln Gly Ser Ala Gly Ser Met Gly Pro Arg Gly		
	500 505	510
Pro Pro Gly Asp Val Gly Leu Pro Gly Glu His Gly Ile Pro Gly Lys		
	515 520	525
Gln Gly Ile Lys Gly Glu Lys Gly Asp Pro Gly Gly Ile Ile Gly Pro		
	530 535	540
Pro Gly Leu Pro Gly Pro Lys Gly Glu Ala Gly Pro Pro Gly Lys Ser		
	545 550	555 560
Leu Pro Gly Glu Pro Gly Leu Asp Gly Asn Pro Gly Ala Pro Gly Pro		
	565 570	575
Arg Gly Pro Lys Gly Glu Arg Gly Leu Pro Gly Val His Gly Ser Pro		
	580 585	590
Gly Asp Ile Gly Gln Arg Asp		
	595	

<210> 92  
 <211> 1142  
 <212> PRT  
 <213> Homo sapiens

<400> 92														
Met Arg Leu Thr Gly Pro Trp Lys Leu Trp Leu Trp Met Ser Ile Phe														
1			5				10						15	
Leu Leu Pro Ala Ser Thr Ser Val Thr Val Arg Asp Lys Thr Glu Glu														
		20				25						30		
Ser Cys Pro Ile Leu Arg Ile Glu Gly His Gln Leu Thr Tyr Asp Asn														
		35				40					45			
Ile Asn Lys Leu Glu Val Ser Gly Phe Asp Leu Gly Asp Ser Phe Ser														
		50				55				60				
Leu Arg Arg Ala Phe Cys Glu Ser Asp Lys Thr Cys Phe Lys Leu Gly														
		65				70				75				80
Ser Ala Leu Leu Ile Arg Asp Thr Ile Lys Ile Phe Pro Lys Gly Leu														
				85				90					95	
Pro Glu Glu Tyr Ser Val Ala Ala Met Phe Arg Val Arg Arg Asn Ala														
		100					105						110	

Lys Lys Glu Arg Trp Phe Leu Trp Gln Val Leu Asn Gln Gln Asn Ile  
 115 120 125  
 Pro Gln Ile Ser Ile Val Val Asp Gly Gly Lys Lys Val Val Glu Phe  
 130 135 140  
 Met Phe Gln Ala Thr Glu Gly Asp Val Leu Asn Tyr Ile Phe Arg Asn  
 145 150 155 160  
 Arg Glu Leu Arg Pro Leu Phe Asp Arg Gln Trp His Lys Leu Gly Ile  
 165 170 175  
 Ser Ile Gln Ser Gln Val Ile Ser Leu Tyr Met Asp Cys Asn Leu Ile  
 180 185 190  
 Ala Arg Arg Gln Thr Asp Glu Lys Asp Thr Val Asp Phe His Gly Arg  
 195 200 205  
 Thr Val Ile Ala Thr Arg Ala Ser Asp Gly Lys Pro Val Asp Ile Glu  
 210 215 220  
 Leu His Gln Leu Lys Ile Tyr Cys Ser Ala Asn Leu Ile Ala Gln Glu  
 225 230 235 240  
 Thr Cys Cys Glu Ile Ser Asp Thr Lys Cys Pro Glu Gln Asp Gly Phe  
 245 250 255  
 Gly Asn Ile Ala Ser Ser Trp Val Thr Ala His Ala Ser Lys Met Ser  
 260 265 270  
 Ser Tyr Leu Pro Ala Lys Leu Glu Leu Lys Asp Gln Cys Gln Cys Ile  
 275 280 285  
 Pro Asn Lys Gly Glu Ala Gly Leu Pro Gly Ala Pro Gly Ser Pro Gly  
 290 295 300  
 Gln Lys Gly His Lys Gly Glu Pro Gly Glu Asn Gly Leu His Gly Ala  
 305 310 315 320  
 Pro Gly Phe Pro Gly Gln Lys Gly Glu Gln Gly Phe Glu Gly Ser Lys  
 325 330 335  
 Gly Glu Thr Gly Glu Lys Gly Glu Gln Gly Glu Lys Gly Asp Pro Ala  
 340 345 350  
 Leu Ala Gly Leu Asn Gly Glu Asn Gly Leu Lys Gly Val Leu Gly Pro  
 355 360 365  
 His Gly Pro Pro Gly Pro Lys Gly Glu Lys Gly Asp Thr Gly Pro Pro  
 370 375 380  
 Gly Pro Pro Ala Leu Pro Gly Ser Leu Gly Ile Gln Gly Pro Gln Gly  
 385 390 395 400  
 Pro Pro Gly Lys Glu Gly Gln Arg Gly Arg Arg Gly Lys Thr Gly Pro  
 405 410 415

Pro Gly Lys Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Ile Gln  
 420 425 430  
 Gly Ile His Gln Thr Leu Gly Gly Asp Asp Asn Lys Asp Asn Lys Gly  
 435 440 445  
 Asn Asp Glu His Glu Ala Gly Gly Leu Lys Gly Asp Lys Gly Glu Thr  
 450 455 460  
 Gly Leu Pro Gly Phe Pro Gly Ser Val Gly Pro Lys Gly Gln Lys Gly  
 465 470 475 480  
 Glu Pro Gly Glu Pro Phe Thr Lys Gly Glu Lys Gly Asp Arg Gly Glu  
 485 490 495  
 Pro Gly Val Ile Gly Ser Gln Gly Val Lys Gly Glu Pro Gly Asp Pro  
 500 505 510  
 Gly Pro Pro Gly Leu Ile Gly Ser Pro Gly Leu Lys Gly Gln Gln Gly  
 515 520 525  
 Ser Ala Gly Ser Met Gly Pro Arg Gly Pro Pro Gly Asp Val Gly Leu  
 530 535 540  
 Pro Gly Glu His Gly Ile Pro Gly Lys Gln Gly Ile Lys Gly Glu Lys  
 545 550 555 560  
 Gly Asp Pro Gly Gly Ile Ile Gly Pro Pro Gly Leu Pro Gly Pro Lys  
 565 570 575  
 Gly Glu Ala Gly Pro Pro Gly Lys Ser Leu Pro Gly Glu Pro Gly Leu  
 580 585 590  
 Asp Gly Asn Pro Gly Ala Pro Gly Pro Arg Gly Pro Lys Gly Glu Arg  
 595 600 605  
 Gly Leu Pro Gly Val His Gly Ser Pro Gly Asp Ile Gly Pro Gln Gly  
 610 615 620  
 Ile Gly Ile Pro Gly Arg Thr Gly Ala Gln Gly Pro Ala Gly Glu Pro  
 625 630 635 640  
 Gly Ile Gln Gly Pro Arg Gly Leu Pro Gly Leu Pro Gly Thr Pro Gly  
 645 650 655  
 Thr Pro Gly Asn Asp Gly Val Pro Gly Arg Asp Gly Lys Pro Gly Leu  
 660 665 670  
 Pro Gly Pro Pro Gly Asp Pro Ile Ala Leu Pro Leu Leu Gly Asp Ile  
 675 680 685  
 Gly Ala Leu Leu Lys Asn Phe Cys Gly Asn Cys Gln Ala Ser Val Pro  
 690 695 700  
 Gly Leu Lys Ser Asn Lys Gly Glu Glu Gly Gly Ala Gly Glu Pro Gly  
 705 710 715 720

Lys Tyr Asp Ser Met Ala Arg Lys Gly Asp Ile Gly Pro Arg Gly Pro  
 725 730 735  
 Pro Gly Ile Pro Gly Arg Glu Gly Pro Lys Gly Ser Lys Gly Glu Arg  
 740 745 750  
 Gly Tyr Pro Gly Ile Pro Gly Glu Lys Gly Asp Glu Gly Leu Gln Gly  
 755 760 765  
 Ile Pro Gly Ile Pro Gly Ala Pro Gly Pro Thr Gly Pro Pro Gly Leu  
 770 775 780  
 Met Gly Arg Thr Gly His Pro Gly Pro Thr Gly Ala Lys Gly Glu Lys  
 785 790 795 800  
 Gly Ser Asp Gly Pro Pro Gly Lys Pro Gly Pro Pro Gly Pro Pro Gly  
 805 810 815  
 Ile Pro Phe Asn Glu Arg Asn Gly Met Ser Ser Leu Tyr Lys Ile Lys  
 820 825 830  
 Gly Gly Val Asn Val Pro Ser Tyr Pro Gly Pro Pro Gly Pro Pro Gly  
 835 840 845  
 Pro Lys Gly Asp Pro Gly Pro Val Gly Glu Pro Gly Ala Met Gly Leu  
 850 855 860  
 Pro Gly Leu Glu Gly Phe Pro Gly Val Lys Gly Asp Arg Gly Pro Ala  
 865 870 875 880  
 Gly Pro Pro Gly Ile Ala Gly Met Ser Gly Lys Pro Gly Ala Pro Gly  
 885 890 895  
 Pro Pro Gly Val Pro Gly Glu Pro Gly Glu Arg Gly Pro Val Gly Asp  
 900 905 910  
 Ile Gly Phe Pro Gly Pro Glu Gly Pro Ser Gly Lys Pro Gly Ile Asn  
 915 920 925  
 Gly Lys Asp Gly Ile Pro Gly Ala Glu Gly Ile Met Gly Lys Pro Gly  
 930 935 940  
 Asp Arg Gly Pro Lys Gly Glu Arg Gly Asp Gln Gly Ile Pro Gly Asp  
 945 950 955 960  
 Arg Gly Ser Gln Gly Glu Arg Gly Lys Pro Gly Leu Thr Gly Met Lys  
 965 970 975  
 Gly Ala Ile Gly Pro Met Gly Pro Pro Gly Asn Lys Gly Ser Met Gly  
 980 985 990  
 Ser Pro Gly His Gln Gly Pro Pro Gly Ser Pro Gly Ile Pro Gly Ile  
 995 1000 1005  
 Pro Ala Asp Ala Val Ser Phe Glu Glu Ile Lys Lys Tyr Ile Asn Gln  
 1010 1015 1020

Glu Val Leu Arg Ile Phe Glu Glu Arg Met Ala Val Phe Leu Ser Gln  
 1025 1030 1035 1040  
 Leu Lys Leu Pro Ala Ala Met Leu Ala Ala Gln Ala Tyr Gly Arg Pro  
 1045 1050 1055  
 Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly Pro Pro Gly Asp Pro Gly  
 1060 1065 1070  
 Pro Gln Gly Tyr Arg Gly Gln Lys Gly Glu Arg Gly Glu Pro Gly Ile  
 1075 1080 1085  
 Gly Leu Pro Gly Ser Pro Gly Leu Pro Gly Thr Ser Ala Leu Gly Leu  
 1090 1095 1100  
 Pro Gly Ser Pro Gly Ala Pro Gly Pro Gln Gly Pro Pro Gly Pro Ser  
 1105 1110 1115 1120  
 Gly Arg Cys Asn Pro Glu Asp Cys Leu Tyr Pro Val Ser His Ala His  
 1125 1130 1135  
 Gln Arg Thr Gly Gly Asn  
 1140

<210> 93  
 <211> 1142  
 <212> PRT  
 <213> Homo sapiens

<400> 93  
 Met Arg Leu Thr Gly Pro Trp Lys Leu Trp Leu Trp Met Ser Ile Phe  
 1 5 10 15  
 Leu Leu Pro Ala Ser Thr Ser Val Thr Val Arg Asp Lys Thr Glu Glu  
 20 25 30  
 Ser Cys Pro Ile Leu Arg Ile Glu Gly His Gln Leu Thr Tyr Asp Asn  
 35 40 45  
 Ile Asn Lys Leu Glu Val Ser Gly Phe Asp Leu Gly Asp Ser Phe Ser  
 50 55 60  
 Leu Arg Arg Ala Phe Cys Glu Ser Asp Lys Thr Cys Phe Lys Leu Gly  
 65 70 75 80  
 Ser Ala Leu Leu Ile Arg Asp Thr Ile Lys Ile Phe Pro Lys Gly Leu  
 85 90 95  
 Pro Glu Glu Tyr Ser Val Ala Ala Met Phe Arg Val Arg Arg Asn Ala  
 100 105 110  
 Lys Lys Glu Arg Trp Phe Leu Trp Gln Val Leu Asn Gln Gln Asn Ile  
 115 120 125  
 Pro Gln Ile Ser Ile Val Val Asp Gly Gly Lys Lys Val Val Glu Phe  
 130 135 140

Met	Phe	Gln	Ala	Thr	Glu	Gly	Asp	Val	Leu	Asn	Tyr	Ile	Phe	Arg	Asn	
145					150					155					160	
Arg	Glu	Leu	Arg	Pro	Leu	Phe	Asp	Arg	Gln	Trp	His	Lys	Leu	Gly	Ile	
				165					170					175		
Ser	Ile	Gln	Ser	Gln	Val	Ile	Ser	Leu	Tyr	Met	Asp	Cys	Asn	Leu	Ile	
			180					185					190			
Ala	Arg	Arg	Gln	Thr	Asp	Glu	Lys	Asp	Thr	Val	Asp	Phe	His	Gly	Arg	
		195					200					205				
Thr	Val	Ile	Ala	Thr	Arg	Ala	Ser	Asp	Gly	Lys	Pro	Val	Asp	Ile	Glu	
	210					215					220					
Leu	His	Gln	Leu	Lys	Ile	Tyr	Cys	Ser	Ala	Asn	Leu	Ile	Ala	Gln	Glu	
225					230					235					240	
Thr	Cys	Cys	Glu	Ile	Ser	Asp	Thr	Lys	Cys	Pro	Glu	Gln	Asp	Gly	Phe	
			245						250					255		
Gly	Asn	Ile	Ala	Ser	Ser	Trp	Val	Thr	Ala	His	Ala	Ser	Lys	Met	Ser	
			260					265						270		
Ser	Tyr	Leu	Pro	Ala	Lys	Gln	Glu	Leu	Lys	Asp	Gln	Cys	Gln	Cys	Ile	
		275					280					285				
Pro	Asn	Lys	Gly	Glu	Ala	Gly	Leu	Pro	Gly	Ala	Pro	Gly	Ser	Pro	Gly	
	290					295					300					
Gln	Lys	Gly	His	Lys	Gly	Glu	Pro	Gly	Glu	Asn	Gly	Leu	His	Gly	Ala	
305					310					315					320	
Pro	Gly	Phe	Pro	Gly	Gln	Lys	Gly	Glu	Gln	Gly	Phe	Glu	Gly	Ser	Lys	
				325					330					335		
Gly	Glu	Thr	Gly	Glu	Lys	Gly	Glu	Gln	Gly	Glu	Lys	Gly	Asp	Pro	Ala	
			340					345					350			
Leu	Ala	Gly	Leu	Asn	Gly	Glu	Asn	Gly	Leu	Lys	Gly	Asp	Leu	Gly	Pro	
		355					360					365				
His	Gly	Pro	Pro	Gly	Pro	Lys	Gly	Glu	Lys	Gly	Asp	Thr	Gly	Pro	Pro	
	370					375					380					
Gly	Pro	Pro	Ala	Leu	Pro	Gly	Ser	Leu	Gly	Ile	Gln	Gly	Pro	Gln	Gly	
385					390					395				400		
Pro	Pro	Gly	Lys	Glu	Gly	Gln	Arg	Gly	Arg	Arg	Gly	Lys	Thr	Gly	Pro	
				405					410					415		
Pro	Gly	Lys	Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Ile	Gln	
		420					425						430			
Gly	Ile	His	Gln	Thr	Leu	Gly	Gly	Tyr	Tyr	Asn	Lys	Asp	Asn	Lys	Gly	
		435					440					445				



Asn Asp Glu His Glu Ala Gly Gly Leu Lys Gly Asp Lys Gly Glu Thr  
 450 455 460  
 Gly Leu Pro Gly Phe Pro Gly Ser Val Gly Pro Lys Gly Gln Lys Gly  
 465 470 475 480  
 Glu Pro Gly Glu Pro Phe Thr Lys Gly Glu Lys Gly Asp Arg Gly Glu  
 485 490 495  
 Pro Gly Val Ile Gly Ser Gln Gly Val Lys Gly Glu Pro Gly Asp Pro  
 500 505 510  
 Gly Pro Pro Gly Leu Ile Gly Ser Pro Gly Leu Lys Gly Gln Gln Gly  
 515 520 525  
 Ser Ala Gly Ser Met Gly Pro Arg Gly Pro Pro Gly Asp Val Gly Leu  
 530 535 540  
 Pro Gly Glu His Gly Ile Pro Gly Lys Gln Gly Ile Lys Gly Glu Lys  
 545 550 555 560  
 Gly Asp Pro Gly Gly Ile Ile Gly Pro Pro Gly Leu Pro Gly Pro Lys  
 565 570 575  
 Gly Glu Ala Gly Pro Pro Gly Lys Ser Leu Pro Gly Glu Pro Gly Leu  
 580 585 590  
 Asp Gly Asn Pro Gly Ala Pro Gly Pro Arg Gly Pro Lys Gly Glu Arg  
 595 600 605  
 Gly Leu Pro Gly Val His Gly Ser Pro Gly Asp Ile Gly Pro Gln Gly  
 610 615 620  
 Ile Gly Ile Pro Gly Arg Thr Gly Ala Gln Gly Pro Ala Gly Glu Pro  
 625 630 635 640  
 Gly Ile Gln Gly Pro Arg Gly Leu Pro Gly Leu Pro Gly Thr Pro Gly  
 645 650 655  
 Thr Pro Gly Asn Asp Gly Val Pro Gly Arg Asp Gly Lys Pro Gly Leu  
 660 665 670  
 Pro Gly Pro Pro Gly Asp Pro Ile Ala Leu Pro Leu Leu Gly Asp Ile  
 675 680 685  
 Gly Ala Leu Leu Lys Asn Phe Cys Gly Asn Cys Gln Ala Ser Val Pro  
 690 695 700  
 Gly Leu Lys Ser Asn Lys Gly Glu Glu Gly Gly Ala Gly Glu Pro Gly  
 705 710 715 720  
 Lys Tyr Asp Ser Met Ala Arg Lys Gly Asp Ile Gly Pro Arg Gly Pro  
 725 730 735  
 Pro Gly Ile Pro Gly Arg Glu Gly Pro Lys Gly Ser Lys Gly Glu Arg  
 740 745 750

Gly Tyr Pro Gly Ile Pro Gly Glu Lys Gly Asp Glu Gly Leu Gln Gly  
 755 760 765  
 Ile Pro Gly Ile Pro Gly Ala Pro Gly Pro Thr Gly Pro Pro Gly Leu  
 770 775 780  
 Met Gly Arg Thr Gly His Pro Gly Pro Thr Gly Ala Lys Gly Glu Lys  
 785 790 795 800  
 Gly Ser Asp Gly Pro Pro Gly Lys Pro Gly Pro Pro Gly Pro Pro Gly  
 805 810 815  
 Ile Pro Phe Asn Glu Arg Asn Gly Met Ser Ser Leu Tyr Lys Ile Lys  
 820 825 830  
 Gly Gly Val Asn Val Pro Ser Tyr Pro Gly Pro Pro Gly Pro Pro Gly  
 835 840 845  
 Pro Lys Gly Asp Pro Gly Pro Val Gly Glu Pro Gly Ala Met Gly Leu  
 850 855 860  
 Pro Gly Leu Glu Gly Phe Pro Gly Val Lys Gly Asp Arg Gly Pro Ala  
 865 870 875 880  
 Gly Pro Pro Gly Ile Ala Gly Met Ser Gly Lys Pro Gly Ala Pro Gly  
 885 890 895  
 Pro Pro Gly Val Pro Gly Glu Pro Gly Glu Arg Gly Pro Val Gly Asp  
 900 905 910  
 Ile Gly Phe Pro Gly Pro Glu Gly Pro Ser Gly Lys Pro Gly Ile Asn  
 915 920 925  
 Gly Lys Asp Gly Ile Pro Gly Ala Gln Gly Ile Met Gly Lys Pro Gly  
 930 935 940  
 Asp Arg Gly Pro Lys Gly Glu Arg Gly Asp Gln Gly Ile Pro Gly Asp  
 945 950 955 960  
 Arg Gly Ser Gln Gly Glu Arg Gly Lys Pro Gly Leu Thr Gly Met Lys  
 965 970 975  
 Gly Ala Ile Gly Pro Met Gly Pro Pro Gly Asn Lys Gly Ser Met Gly  
 980 985 990  
 Ser Pro Gly His Gln Gly Pro Pro Gly Ser Pro Gly Ile Pro Gly Ile  
 995 1000 1005  
 Pro Ala Asp Ala Val Ser Phe Glu Glu Ile Lys Lys Tyr Ile Asn Gln  
 1010 1015 1020  
 Glu Val Leu Arg Ile Phe Glu Glu Arg Met Ala Val Phe Leu Ser Gln  
 1025 1030 1035 1040  
 Leu Lys Leu Pro Ala Ala Met Leu Ala Ala Gln Ala Tyr Gly Arg Pro  
 1045 1050 1055

Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly Pro Pro Gly Asp Pro Gly  
 1060 1065 1070

Pro Gln Gly Tyr Arg Gly Gln Lys Gly Glu Arg Gly Glu Pro Gly Ile  
 1075 1080 1085

Gly Leu Pro Gly Ser Pro Gly Leu Pro Gly Thr Ser Ala Leu Gly Leu  
 1090 1095 1100

Pro Gly Ser Pro Gly Ala Pro Gly Pro Gln Gly Pro Pro Gly Pro Ser  
 1105 1110 1115 1120

Gly Arg Cys Asn Pro Glu Asp Cys Leu Tyr Pro Val Ser His Ala His  
 1125 1130 1135

Gln Arg Thr Gly Gly Asn  
 1140

<210> 94

<211> 913

<212> PRT

<213> Homo sapiens

<400> 94

Met Arg Leu Thr Gly Pro Trp Lys Leu Trp Leu Trp Met Ser Ile Phe  
 1 5 10 15

Leu Leu Pro Ala Ser Thr Ser Val Thr Val Arg Asp Lys Thr Glu Glu  
 20 25 30

Ser Cys Pro Ile Leu Arg Ile Glu Gly His Gln Leu Thr Tyr Asp Asn  
 35 40 45

Ile Asn Lys Leu Glu Val Ser Gly Phe Asp Leu Gly Asp Ser Phe Ser  
 50 55 60

Leu Arg Arg Ala Phe Cys Glu Ser Asp Lys Thr Cys Phe Lys Leu Gly  
 65 70 75 80

Ser Ala Leu Leu Ile Arg Asp Thr Met Tyr Lys Ile Phe Pro Lys Gly  
 85 90 95

Leu Pro Glu Glu Tyr Ser Val Ala Ala Met Phe Arg Val Arg Arg Asn  
 100 105 110

Ala Lys Lys Glu Arg Trp Phe Leu Trp Gln Val Leu Asn Gln Gln Asn  
 115 120 125

Ile Pro Gln Ile Ser Ile Val Val Asp Gly Gly Lys Lys Val Val Glu  
 130 135 140

Phe Met Phe Gln Ala Thr Glu Gly Asp Val Leu Asn Tyr Ile Phe Arg  
 145 150 155 160

Asn Arg Glu Leu Arg Pro Leu Phe Asp Arg Gln Trp His Lys Leu Gly

165						170						175			
Ile	Ser	Ile	Gln	Ser	Gln	Val	Ile	Ser	Leu	Tyr	Met	Asp	Cys	Asn	Leu
			180				185						190		
Ile	Ala	Arg	Arg	Gln	Thr	Asp	Glu	Lys	Asp	Thr	Val	Asp	Phe	His	Gly
			195				200						205		
Arg	Thr	Val	Ile	Ala	Thr	Arg	Ala	Ser	Asp	Gly	Lys	Pro	Val	Asp	Ile
			210				215						220		
Glu	Leu	His	Gln	Leu	Lys	Ile	Tyr	Cys	Ser	Ala	Asn	Leu	Ile	Ala	Gln
			225				230						235		
Glu	Thr	Cys	Cys	Glu	Ile	Ser	Asp	Thr	Lys	Cys	Pro	Glu	Gln	Asp	Gly
			245				250						255		
Phe	Gly	Asn	Ile	Ala	Ser	Ser	Trp	Val	Thr	Ala	His	Ala	Ser	Lys	Met
			260				265						270		
Ser	Ser	Tyr	Leu	Pro	Ala	Lys	Gln	Glu	Leu	Lys	Asp	Gln	Cys	Gln	Cys
			275				280						285		
Ile	Pro	Asn	Lys	Gly	Glu	Ala	Gly	Leu	Pro	Gly	Ala	Pro	Gly	Ser	Pro
			290				295						300		
Gly	Gln	Lys	Gly	His	Lys	Gly	Glu	Pro	Gly	Glu	Asn	Gly	Leu	His	Gly
			305				310						315		
Ala	Pro	Gly	Phe	Pro	Gly	Gln	Lys	Gly	Glu	Gln	Gly	Phe	Glu	Gly	Ser
			325				330						335		
Lys	Gly	Glu	Thr	Gly	Glu	Lys	Gly	Glu	Gln	Gly	Glu	Lys	Gly	Asp	Pro
			340				345						350		
Ala	Leu	Ala	Gly	Leu	Asn	Gly	Glu	Asn	Gly	Leu	Lys	Gly	Asp	Leu	Gly
			355				360						365		
Pro	His	Gly	Pro	Pro	Gly	Pro	Lys	Gly	Glu	Lys	Gly	Asp	Thr	Gly	Pro
			370				375						380		
Pro	Gly	Pro	Pro	Ala	Leu	Pro	Gly	Ser	Leu	Gly	Ile	Gln	Gly	Pro	Gln
			385				390						395		
Gly	Pro	Pro	Gly	Lys	Glu	Gly	Gln	Arg	Gly	Arg	Arg	Gly	Lys	Thr	Gly
			405				410						415		
Pro	Pro	Gly	Lys	Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Ile
			420				425						430		
Gln	Gly	Ile	His	Gln	Thr	Leu	Gly	Gly	Tyr	Tyr	Asn	Lys	Asp	Asn	Lys
			435				440						445		
Gly	Asn	Asp	Glu	His	Glu	Ala	Gly	Gly	Leu	Lys	Gly	Asp	Lys	Gly	Glu
			450				455						460		
Thr	Gly	Leu	Pro	Gly	Phe	Pro	Gly	Ser	Val	Gly	Pro	Lys	Gly	Gln	Lys

465		470		475		480
Gly Glu Pro Gly	Glu Pro Phe Thr Lys	Gly Glu Lys Gly Asp Arg Gly				
	485	490			495	
Glu Pro Gly Val	Ile Gly Ser Gln	Gly Val Lys Gly Glu Pro Gly Asp				
	500	505			510	
Pro Gly Pro Pro Gly	Leu Ile Gly Ser Pro Gly Leu Lys Gly Gln Gln					
	515	520			525	
Gly Ser Ala Gly Ser Met	Gly Pro Arg Gly Pro Pro Gly Asp Val Gly					
	530	535			540	
Leu Pro Gly Glu His	Gly Ile Pro Gly Lys Gln Gly Ile Lys Gly Glu					
	545	550			555	560
Lys Gly Asp Pro Gly Gly Ile Ile	Gly Pro Pro Gly Leu Pro Gly Pro					
	565	570			575	
Lys Gly Glu Ala Gly Pro Pro Gly	Lys Ser Leu Pro Gly Glu Pro Gly					
	580	585			590	
Leu Asp Gly Asn Pro Gly Ala Pro Gly Pro Arg Gly Pro Lys Gly Glu						
	595	600			605	
Arg Gly Leu Pro Gly Val His Gly Ser Pro Gly Asp Ile Gly Pro Gln						
	610	615			620	
Gly Ile Gly Ile Pro Gly Arg Thr Gly Ala Gln Gly Pro Ala Gly Glu						
	625	630			635	640
Pro Gly Ile Gln Gly Pro Arg Gly Leu Pro Gly Leu Pro Gly Thr Pro						
	645	650			655	
Gly Thr Pro Gly Asn Asp Gly Val Pro Gly Arg Asp Gly Lys Pro Gly						
	660	665			670	
Leu Pro Gly Pro Pro Gly Asp Pro Ile Ala Leu Pro Leu Leu Gly Asp						
	675	680			685	
Ile Gly Ala Leu Leu Lys Asn Phe Cys Gly Asn Cys Gln Ala Ser Val						
	690	695			700	
Pro Gly Leu Lys Ser Asn Lys Gly Glu Glu Gly Gly Ala Gly Glu Pro						
	705	710			715	720
Gly Lys Tyr Asp Ser Met Ala Arg Lys Gly Asp Ile Gly Pro Arg Gly						
	725	730			735	
Pro Pro Gly Ile Pro Gly Arg Glu Gly Pro Lys Gly Ser Lys Gly Glu						
	740	745			750	
Arg Gly Tyr Pro Gly Ile Pro Gly Glu Lys Gly Asp Glu Gly Leu Gln						
	755	760			765	
Gly Ile Pro Gly Ile Pro Gly Ala Pro Gly Pro Thr Gly Pro Pro Gly						

770	775	780
Leu Met Gly Arg Thr Gly His Pro Gly Pro Thr Gly Ala Lys Gly Glu 785 790 795 800		
Lys Gly Ser Asp Gly Pro Pro Gly Lys Pro Gly Pro Pro Gly Pro Pro 805 810 815		
Gly Ile Pro Phe Asn Glu Arg Asn Gly Met Ser Ser Leu Tyr Lys Ile 820 825 830		
Lys Gly Gly Val Asn Val Pro Ser Tyr Pro Gly Pro Pro Gly Pro Pro 835 840 845		
Gly Pro Lys Gly Asp Pro Gly Pro Val Gly Glu Pro Gly Ala Met Gly 850 855 860		
Leu Pro Gly Leu Glu Gly Phe Pro Gly Val Lys Gly Asp Arg Gly Pro 865 870 875 880		
Ala Gly Pro Pro Gly Ile Ala Gly Met Ser Gly Lys Pro Gly Ala Pro 885 890 895		
Gly Pro Pro Gly Val Pro Gly Glu Pro Val Arg Glu Asp Leu Leu Glu 900 905 910		

Ile

<210> 95  
 <211> 1143  
 <212> PRT  
 <213> Homo sapiens

<400> 95 Met Arg Leu Thr Gly Pro Trp Lys Leu Trp Leu Trp Met Ser Ile Phe 1 5 10 15
Leu Leu Pro Ala Ser Thr Ser Val Thr Val Arg Asp Lys Thr Glu Glu 20 25 30
Ser Cys Pro Ile Leu Arg Ile Glu Gly His Gln Leu Thr Tyr Asp Asn 35 40 45
Ile Asn Lys Leu Glu Val Ser Gly Phe Asp Leu Gly Asp Ser Phe Ser 50 55 60
Leu Arg Arg Ala Phe Cys Glu Ser Asp Lys Thr Cys Phe Lys Leu Gly 65 70 75 80
Ser Ala Leu Leu Ile Arg Asp Thr Met Tyr Lys Ile Phe Pro Lys Gly 85 90 95
Leu Pro Glu Glu Tyr Ser Val Ala Ala Met Phe Arg Val Arg Arg Asn 100 105 110



Pro Pro Gly Lys Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Ile  
 420 425 430  
 Gln Gly Ile His Gln Thr Leu Gly Gly Tyr Tyr Asn Lys Asp Asn Lys  
 435 440 445  
 Gly Asn Asp Glu His Glu Ala Gly Gly Leu Lys Gly Asp Lys Gly Glu  
 450 455 460  
 Thr Gly Leu Pro Gly Phe Pro Gly Ser Val Gly Pro Lys Gly Gln Lys  
 465 470 475 480  
 Gly Glu Pro Gly Glu Pro Phe Thr Lys Gly Glu Lys Gly Asp Arg Gly  
 485 490 495  
 Glu Pro Gly Val Ile Gly Ser Gln Gly Val Lys Gly Glu Pro Gly Asp  
 500 505 510  
 Pro Gly Pro Pro Gly Leu Ile Gly Ser Pro Gly Leu Lys Gly Gln Gln  
 515 520 525  
 Gly Ser Ala Gly Ser Met Gly Pro Arg Gly Pro Pro Gly Asp Val Gly  
 530 535 540  
 Leu Pro Gly Glu His Gly Ile Pro Gly Lys Gln Gly Ile Lys Gly Glu  
 545 550 555 560  
 Lys Gly Asp Pro Gly Gly Ile Ile Gly Pro Pro Gly Leu Pro Gly Pro  
 565 570 575  
 Lys Gly Glu Ala Gly Pro Pro Gly Lys Ser Leu Pro Gly Glu Pro Gly  
 580 585 590  
 Leu Asp Gly Asn Pro Gly Ala Pro Gly Pro Arg Gly Pro Lys Gly Glu  
 595 600 605  
 Arg Gly Leu Pro Gly Val His Gly Ser Pro Gly Asp Ile Gly Pro Gln  
 610 615 620  
 Gly Ile Gly Ile Pro Gly Arg Thr Gly Ala Gln Gly Pro Ala Gly Glu  
 625 630 635 640  
 Pro Gly Ile Gln Gly Pro Arg Gly Leu Pro Gly Leu Pro Gly Thr Pro  
 645 650 655  
 Gly Thr Pro Gly Asn Asp Gly Val Pro Gly Arg Asp Gly Lys Pro Gly  
 660 665 670  
 Leu Pro Gly Pro Pro Gly Asp Pro Ile Ala Leu Pro Leu Leu Gly Asp  
 675 680 685  
 Ile Gly Ala Leu Leu Lys Asn Phe Cys Gly Asn Cys Gln Ala Ser Val  
 690 695 700  
 Pro Gly Leu Lys Ser Asn Lys Gly Glu Glu Gly Gly Ala Gly Glu Pro  
 705 710 715 720



Gly Lys Tyr Asp Ser Met Ala Arg Lys Gly Asp Ile Gly Pro Arg Gly  
 725 730 735  
 Pro Pro Gly Ile Pro Gly Arg Glu Gly Pro Lys Gly Ser Lys Gly Glu  
 740 745 750  
 Arg Gly Tyr Pro Gly Ile Pro Gly Glu Lys Gly Asp Glu Gly Leu Gln  
 755 760 765  
 Gly Ile Pro Gly Ile Pro Gly Ala Pro Gly Pro Thr Gly Pro Pro Gly  
 770 775 780  
 Leu Met Gly Arg Thr Gly His Pro Gly Pro Thr Gly Ala Lys Gly Glu  
 785 790 795 800  
 Lys Gly Ser Asp Gly Pro Pro Gly Lys Pro Gly Pro Pro Gly Pro Pro  
 805 810 815  
 Gly Ile Pro Phe Asn Glu Arg Asn Gly Met Ser Ser Leu Tyr Lys Ile  
 820 825 830  
 Lys Gly Gly Val Asn Val Pro Ser Tyr Pro Gly Pro Pro Gly Pro Pro  
 835 840 845  
 Gly Pro Lys Gly Asp Pro Gly Pro Val Gly Glu Pro Gly Ala Met Gly  
 850 855 860  
 Leu Pro Gly Leu Glu Gly Phe Pro Gly Val Lys Gly Asp Arg Gly Pro  
 865 870 875 880  
 Ala Gly Pro Pro Gly Ile Ala Gly Met Ser Gly Lys Pro Gly Ala Pro  
 885 890 895  
 Gly Pro Pro Gly Val Pro Gly Glu Pro Gly Glu Arg Gly Pro Val Gly  
 900 905 910  
 Asp Ile Gly Phe Pro Gly Pro Glu Gly Pro Ser Gly Lys Pro Gly Ile  
 915 920 925  
 Asn Gly Lys Asp Gly Ile Pro Gly Ala Gln Gly Ile Met Gly Lys Pro  
 930 935 940  
 Gly Asp Arg Gly Pro Lys Gly Glu Arg Gly Asp Gln Gly Ile Pro Gly  
 945 950 955 960  
 Asp Arg Gly Ser Gln Gly Glu Arg Gly Lys Pro Gly Leu Thr Gly Met  
 965 970 975  
 Lys Gly Ala Ile Gly Pro Met Gly Pro Pro Gly Asn Lys Gly Ser Met  
 980 985 990  
 Gly Ser Pro Gly His Gln Gly Pro Pro Gly Ser Pro Gly Ile Pro Gly  
 995 1000 1005  
 Ile Pro Ala Asp Ala Val Ser Phe Glu Glu Ile Lys Lys Tyr Ile Asn  
 1010 1015 1020

Gln Glu Val Leu Arg Ile Phe Glu Glu Arg Met Ala Val Phe Leu Ser  
 1025 1030 1035 1040  
 Gln Leu Lys Leu Pro Ala Ala Met Leu Ala Ala Gln Ala Tyr Gly Arg  
 1045 1050 1055  
 Pro Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly Pro Pro Gly Asp Pro  
 1060 1065 1070  
 Gly Pro Gln Gly Tyr Arg Gly Gln Lys Gly Glu Arg Gly Glu Pro Gly  
 1075 1080 1085  
 Ile Gly Leu Pro Gly Ser Pro Gly Leu Pro Gly Thr Ser Ala Leu Gly  
 1090 1095 1100  
 Leu Pro Gly Ser Pro Gly Ala Pro Gly Pro Gln Gly Pro Pro Gly Pro  
 1105 1110 1115 1120  
 Ser Gly Arg Cys Asn Pro Glu Asp Cys Leu Tyr Pro Val Ser His Ala  
 1125 1130 1135  
 His Gln Arg Thr Cys Gly Asn  
 1140

<210> 96  
 <211> 100  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: synthetic  
 polypeptide

<400> 96  
 Met Gly Met Met Cys Gly Ala Pro Ser Ala Thr Gln Pro Ala Thr Ala  
 1 5 10 15  
 Glu Thr Gln His Ile Ala Asp Gln Val Arg Ser Gln Leu Glu Glu Lys  
 20 25 30  
 Tyr Asn Lys Lys Phe Pro Val Phe Lys Ala Val Ser Phe Lys Ser Gln  
 35 40 45  
 Val Val Ala Gly Thr Asn Tyr Phe Ile Lys Val His Val Gly Asp Glu  
 50 55 60  
 Asp Phe Val His Leu Arg Val Phe Gln Ser Leu Pro His Glu Asn Lys  
 65 70 75 80  
 Pro Leu Thr Leu Ser Asn Tyr Gln Thr Asn Lys Ala Lys His Asp Glu  
 85 90 95  
 Leu Thr Tyr Phe  
 100

<210> 97  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
 Met Met Cys Gly Ala Pro Ser Ala Thr Gln Pro Ala Thr Ala Glu Thr  
     1                    5                    10                    15  
 Gln His Ile Ala Asp Gln Val Arg Ser Gln Leu Glu Glu Lys Glu Asn  
                     20                    25                    30  
 Lys Lys Phe Pro Val Phe Lys Ala Val Ser Phe Lys Ser Gln Val Val  
             35                    40                    45  
 Ala Gly Thr Asn Tyr Phe Ile Lys Val His Val Gly Asp Glu Asp Phe  
             50                    55                    60  
 Val His Leu Arg Val Phe Gln Ser Leu Pro His Glu Asn Lys Pro Leu  
     65                    70                    75                    80  
 Thr Leu Ser Asn Tyr Gln Thr Asn Lys Ala Lys His Asp Glu Leu Thr  
                     85                    90                    95  
 Tyr Phe

<210> 98  
 <211> 98  
 <212> PRT  
 <213> Oryctolagus cuniculus

<400> 98  
 Met Met Cys Gly Ala Pro Ser Pro Ala Gln Ala Ala Thr Ala Glu Thr  
     1                    5                    10                    15  
 Gln Asp Ile Ala Asp Gln Val Lys Ala Gln Leu Glu Glu Lys Glu Asn  
                     20                    25                    30  
 Cys Lys Phe Asp Val Phe Lys Gly Met Ser Phe Lys Ser Gln Val Val  
             35                    40                    45  
 Ala Gly Thr Asn Tyr Phe Ile Lys Val His Val Gly Asp Asp Arg Phe  
             50                    55                    60  
 Ile His Leu Arg Val Phe Arg Ser Leu Pro His Glu Asn Lys Pro Leu  
     65                    70                    75                    80  
 Ser Leu Ala Val Tyr Gln Ala Asn Lys Gly Glu His Asp Glu Leu Thr  
                     85                    90                    95  
 Tyr Phe

<210> 99

<211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 99  
 Met Met Cys Gly Ala Pro Ser Ala Thr Gln Pro Ala Thr Ala Glu Thr  
     1                    5                    10                    15  
 Gln His Ile Ala Asp Gln Val Arg Ser Gln Leu Glu Glu Lys Tyr Asn  
                     20                    25                    30  
 Lys Lys Phe Pro Val Phe Lys Ala Val Ser Phe Lys Ser Gln Val Val  
             35                    40                    45  
 Ala Gly Thr Asn Tyr Phe Ile Lys Val His Val Gly Asp Glu Asp Phe  
             50                    55                    60  
 Val His Leu Arg Val Phe Gln Ser Leu Pro His Glu Asn Lys Pro Leu  
     65                    70                    75                    80  
 Thr Leu Ser Asn Tyr Gln Thr Asn Lys Ala Lys His Asp Glu Leu Thr  
                     85                    90                    95  
 Tyr Phe

<210> 100  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 100  
 Met Met Ser Gly Ala Pro Ser Ala Thr Gln Pro Ala Thr Ala Glu Thr  
     1                    5                    10                    15  
 Gln His Ile Ala Asp Gln Val Arg Ser Gln Leu Glu Glu Lys Tyr Asn  
                     20                    25                    30  
 Lys Lys Phe Pro Val Phe Lys Ala Val Ser Phe Lys Ser Gln Val Val  
             35                    40                    45  
 Ala Gly Thr Asn Tyr Phe Ile Lys Val His Val Gly Asp Glu Asp Phe  
             50                    55                    60  
 Val His Leu Arg Val Phe Gln Ser Leu Pro His Glu Asn Lys Pro Leu  
     65                    70                    75                    80  
 Thr Leu Ser Asn Tyr Gln Thr Asn Lys Ala Lys His Asp Glu Leu Thr  
                     85                    90                    95  
 Tyr Phe

<210> 101  
 <211> 370

<212> PRT

<213> Rattus norvegicus

<400> 101

Met Glu Val Ser Asn Leu Ser Gly Ala Thr Pro Gly Ile Ala Phe Pro  
1 5 10 15

Pro Gly Pro Glu Ser Cys Ser Asp Ser Pro Ser Ser Gly Arg Ser Met  
20 25 30

Gly Ser Thr Pro Gly Gly Leu Ile Leu Ser Gly Arg Glu Pro Pro Phe  
35 40 45

Ser Ala Phe Thr Val Leu Val Val Thr Leu Leu Val Leu Leu Ile Ala  
50 55 60

Ala Thr Phe Leu Trp Asn Leu Leu Val Leu Val Thr Ile Leu Arg Val  
65 70 75 80

Arg Ala Phe His Arg Val Pro His Asn Leu Val Ala Ser Thr Ala Val  
85 90 95

Ser Asp Val Leu Val Ala Ala Leu Val Met Pro Leu Ser Leu Val Ser  
100 105 110

Glu Leu Ser Ala Gly Arg Arg Trp Gln Leu Gly Arg Ser Leu Cys His  
115 120 125

Val Trp Ile Ser Phe Asp Val Leu Cys Cys Thr Ala Ser Ile Trp Asn  
130 135 140

Val Ala Ala Ile Ala Leu Asp Arg Tyr Trp Thr Ile Thr Arg His Leu  
145 150 155 160

Gln Tyr Thr Leu Arg Thr Arg Arg Arg Ala Ser Ala Leu Met Ile Ala  
165 170 175

Ile Thr Trp Ala Leu Ser Ala Leu Ile Ala Leu Ala Pro Leu Leu Phe  
180 185 190

Gly Trp Gly Glu Ala Tyr Asp Ala Arg Leu Gln Arg Cys Gln Val Ser  
195 200 205

Gln Glu Pro Ser Tyr Ala Val Phe Ser Thr Cys Gly Ala Phe Tyr Val  
210 215 220

Pro Leu Ala Val Val Leu Phe Val Tyr Trp Lys Ile Tyr Lys Ala Ala  
225 230 235 240

Lys Phe Arg Phe Gly Arg Arg Arg Arg Ala Val Val Pro Leu Pro Ala  
245 250 255

Thr Thr Gln Ala Lys Glu Ala Pro Gln Glu Ser Glu Thr Val Phe Thr  
260 265 270

Ala Arg Cys Arg Ala Thr Val Ala Phe Gln Thr Ser Gly Asp Ser Trp  
275 280 285

Arg Glu Gln Lys Glu Lys Arg Ala Ala Met Met Val Gly Ile Leu Ile  
 290 295 300

Gly Val Phe Val Leu Cys Trp Ile Pro Phe Phe Leu Thr Glu Leu Val  
 305 310 315 320

Ser Pro Leu Cys Ala Cys Ser Leu Pro Pro Ile Trp Lys Ser Ile Phe  
 325 330 335

Leu Trp Leu Gly Tyr Ser Asn Ser Phe Phe Asn Pro Leu Ile Tyr Thr  
 340 345 350

Ala Phe Asn Lys Asn Tyr Asn Asn Ala Phe Lys Ser Leu Phe Thr Lys  
 355 360 365

Gln Arg  
 370

<210> 102

<211> 370

<212> PRT

<213> Mus musculus

<400> 102

Met Glu Val Ser Asn Leu Ser Gly Ala Thr Pro Gly Leu Ala Phe Pro  
 1 5 10 15

Pro Gly Pro Glu Ser Cys Ser Asp Ser Pro Ser Ser Gly Arg Ser Met  
 20 25 30

Gly Ser Thr Pro Gly Gly Leu Ile Leu Pro Gly Arg Glu Pro Pro Phe  
 35 40 45

Ser Ala Phe Thr Val Leu Val Val Thr Leu Leu Val Leu Leu Ile Ala  
 50 55 60

Ala Thr Phe Leu Trp Asn Leu Leu Val Leu Val Thr Ile Leu Arg Val  
 65 70 75 80

Arg Ala Phe His Arg Val Pro His Asn Leu Val Ala Ser Thr Ala Val  
 85 90 95

Ser Asp Val Leu Val Ala Val Leu Val Met Pro Leu Ser Leu Val Ser  
 100 105 110

Glu Leu Ser Ala Gly Arg Arg Trp Gln Leu Gly Arg Ser Leu Cys His  
 115 120 125

Val Trp Ile Ser Phe Asp Val Leu Cys Cys Thr Ala Ser Ile Trp Asn  
 130 135 140

Val Ala Ala Ile Ala Leu Asp Arg Tyr Trp Thr Ile Thr Arg His Leu  
 145 150 155 160

Gln Tyr Thr Leu Arg Thr Arg Ser Arg Ala Ser Ala Leu Met Ile Ala



Ser Ala Phe Thr Val Leu Val Val Thr Leu Leu Val Leu Leu Ile Ala  
 50 55 60  
 Ala Thr Phe Leu Trp Asn Leu Leu Val Leu Val Thr Ile Leu Arg Val  
 65 70 75 80  
 Arg Ala Phe His Arg Val Pro His Asn Leu Val Ala Ser Thr Ala Val  
 85 90 95  
 Ser Asp Val Leu Val Ala Ala Leu Val Met Pro Leu Ser Leu Val Ser  
 100 105 110  
 Glu Leu Ser Ala Gly Arg Arg Trp Gln Leu Gly Arg Ser Leu Cys His  
 115 120 125  
 Val Trp Ile Ser Phe Asp Val Leu Cys Cys Thr Ala Ser Ile Trp Asn  
 130 135 140  
 Val Ala Ala Ile Ala Leu Asp Arg Tyr Trp Thr Ile Thr Arg His Leu  
 145 150 155 160  
 Gln Tyr Thr Leu Arg Thr Arg Arg Arg Ala Ser Ala Leu Met Ile Ala  
 165 170 175  
 Thr Trp Ala Leu Ser Ala Leu Ile Ala Leu Ala Pro Leu Leu Phe Gly  
 180 185 190  
 Trp Gly Glu Ala Tyr Asp Ala Arg Leu Gln Arg Cys Gln Val Ser Gln  
 195 200 205  
 Glu Pro Ser Tyr Ala Val Phe Ser Thr Cys Gly Ala Phe Tyr Val Pro  
 210 215 220  
 Leu Ala Val Val Leu Phe Val Tyr Trp Lys Ile Tyr Lys Ala Ala Lys  
 225 230 235 240  
 Phe Arg Phe Gly Arg Arg Arg Arg Ala Val Val Pro Leu Pro Ala Thr  
 245 250 255  
 Thr Gln Ala Lys Glu Ala Pro Gln Glu Ser Glu Thr Val Phe Thr Ala  
 260 265 270  
 Arg Cys Arg Ala Thr Val Ala Phe Gln Thr Ser Gly Asp Ser Trp Arg  
 275 280 285  
 Glu Gln Lys Glu Lys Arg Ala Ala Met Met Val Gly Ile Leu Ile Gly  
 290 295 300  
 Val Phe Val Leu Cys Trp Ile Pro Phe Phe Leu Thr Glu Leu Val Ser  
 305 310 315 320  
 Pro Leu Cys Ala Cys Ser Leu Pro Pro Ile Trp Lys Ser Ile Phe Leu  
 325 330 335  
 Trp Leu Gly Tyr Ser Asn Ser Phe Phe Asn Pro Leu Ile Tyr Thr Ala  
 340 345 350



Phe Asn Lys Asn Tyr Asn Asn Ala Phe Lys Ser Leu Phe Thr Lys Gln  
 355 360 365

Arg

<210> 104  
 <211> 357  
 <212> PRT  
 <213> Homo sapiens

<400> 104  
 Met Asp Leu Pro Val Asn Leu Thr Ser Phe Ser Leu Ser Thr Pro Ser  
 1 5 10 15  
 Pro Leu Glu Thr Asn His Ser Leu Gly Lys Asp Asp Leu Arg Pro Ser  
 20 25 30  
 Ser Pro Leu Leu Ser Val Phe Gly Val Leu Ile Leu Thr Leu Leu Gly  
 35 40 45  
 Phe Leu Val Ala Ala Thr Phe Ala Trp Asn Leu Leu Val Leu Ala Thr  
 50 55 60  
 Ile Leu Arg Val Arg Thr Phe His Arg Val Pro His Asn Leu Val Ala  
 65 70 75 80  
 Ser Met Ala Val Ser Asp Val Leu Val Ala Ala Leu Val Met Pro Leu  
 85 90 95  
 Ser Leu Val His Glu Leu Ser Gly Arg Arg Trp Gln Leu Gly Arg Arg  
 100 105 110  
 Leu Cys Gln Leu Trp Ile Ala Cys Asp Val Leu Cys Cys Thr Ala Ser  
 115 120 125  
 Ile Trp Asn Val Thr Ala Ile Ala Leu Asp Arg Tyr Trp Ser Ile Thr  
 130 135 140  
 Arg His Met Glu Tyr Thr Leu Arg Thr Arg Lys Cys Val Ser Asn Val  
 145 150 155 160  
 Met Ile Ala Leu Thr Trp Ala Leu Ser Ala Val Ile Ser Leu Ala Pro  
 165 170 175  
 Leu Leu Phe Gly Trp Gly Glu Thr Tyr Ser Glu Gly Ser Glu Glu Cys  
 180 185 190  
 Gln Val Ser Arg Glu Pro Ser Tyr Ala Val Phe Ser Thr Val Gly Ala  
 195 200 205  
 Phe Tyr Leu Pro Leu Cys Val Val Leu Phe Val Tyr Trp Lys Ile Tyr  
 210 215 220  
 Lys Ala Ala Lys Phe Arg Val Gly Ser Arg Lys Thr Asn Ser Val Ser  
 225 230 235 240

Pro Ile Ser Glu Ala Val Glu Val Lys Asp Ser Ala Lys Gln Pro Gln  
                   245                                  250                                  255  
 Met Val Phe Thr Val Arg His Ala Thr Val Thr Phe Gln Pro Glu Gly  
                   260                                  265                                  270  
 Asp Thr Trp Arg Glu Gln Lys Glu Gln Arg Ala Ala Leu Met Val Gly  
                   275                                  280                                  285  
 Ile Leu Ile Gly Val Phe Val Leu Cys Trp Ile Pro Phe Phe Leu Thr  
                   290                                  295                                  300  
 Glu Leu Ile Ser Pro Leu Cys Ser Cys Asp Ile Pro Ala Ile Trp Lys  
 305                                  310                                  315                                  320  
 Ser Ile Phe Leu Trp Leu Gly Tyr Ser Asn Ser Phe Phe Asn Pro Leu  
                   325                                  330                                  335  
 Ile Tyr Thr Ala Phe Asn Lys Asn Tyr Asn Ser Ala Phe Lys Asn Phe  
                   340                                  345                                  350  
 Phe Ser Arg Gln His  
                   355

<210> 105  
 <211> 357  
 <212> PRT  
 <213> Rattus norvegicus

<400> 105  
 Met Asp Leu Pro Ile Asn Leu Thr Ser Phe Ser Leu Ser Thr Pro Ser  
   1                                  5                                  10                                  15  
 Thr Leu Glu Pro Asn Arg Ser Leu Asp Thr Glu Ala Leu Arg Thr Ser  
                   20                                  25                                  30  
 Gln Ser Phe Leu Ser Ala Phe Arg Val Leu Val Leu Thr Leu Leu Gly  
                   35                                  40                                  45  
 Phe Leu Ala Ala Ala Thr Phe Thr Trp Asn Leu Leu Val Leu Ala Thr  
                   50                                  55                                  60  
 Ile Leu Arg Val Arg Thr Phe His Arg Val Pro His Asn Leu Val Ala  
   65                                  70                                  75                                  80  
 Ser Met Ala Ile Ser Asp Val Leu Val Ala Val Leu Val Met Pro Leu  
                   85                                  90                                  95  
 Ser Leu Val His Glu Leu Ser Gly Arg Arg Trp Gln Leu Gly Arg Arg  
                   100                                  105                                  110  
 Leu Cys Gln Leu Trp Ile Ala Cys Asp Val Leu Cys Cys Thr Ala Ser  
                   115                                  120                                  125  
 Ile Trp Asn Val Thr Ala Ile Ala Leu Asp Arg Tyr Trp Ser Ile Thr

130	135	140
Arg His Leu Glu Tyr Thr	Leu Arg Ala Arg Lys Arg Val Ser Asn Val	
145	150	155 160
Met Ile Leu Leu Thr Trp	Ala Leu Ser Ala Val Ile Ser Leu Ala Pro	
	165	170 175
Leu Leu Phe Gly Trp Gly	Glu Thr Tyr Ser Glu Leu Ser Glu Glu Cys	
	180	185 190
Gln Val Ser Arg Glu Pro	Ser Tyr Thr Val Phe Ser Thr Val Gly Ala	
	195	200 205
Phe Tyr Leu Pro Leu Cys	Val Val Leu Phe Val Tyr Trp Lys Ile Tyr	
	210	215 220
Lys Ala Ala Lys Phe Arg	Met Gly Ser Arg Lys Thr Asn Ser Val Ser	
	225	230 235 240
Pro Ile Pro Glu Ala Val	Glu Val Lys Asp Ala Ser Gln His Pro Gln	
	245	250 255
Met Val Phe Thr Val Arg	His Ala Thr Val Thr Phe Gln Thr Glu Gly	
	260	265 270
Asp Thr Trp Arg Glu Gln	Lys Glu Gln Arg Ala Ala Leu Met Val Gly	
	275	280 285
Ile Leu Ile Gly Val Phe	Val Leu Cys Trp Phe Pro Phe Phe Val Thr	
	290	295 300
Glu Leu Ile Ser Pro Leu	Cys Ser Trp Asp Ile Pro Ala Leu Trp Lys	
	305	310 315 320
Ser Ile Phe Leu Trp Leu	Gly Tyr Ser Asn Ser Phe Phe Asn Pro Leu	
	325	330 335
Ile Tyr Thr Ala Phe Asn	Arg Ser Tyr Ser Ser Ala Phe Lys Val Phe	
	340	345 350
Phe Ser Lys Gln Gln		
	355	

<210> 106  
 <211> 236  
 <212> PRT  
 <213> Homo sapiens

<400> 106  
 Ala Thr Ser Phe Pro Ile Ala Leu Ile Tyr Leu Val Leu Ile Ala Val  
 1 5 10 15  
 Gly Gln Asn Tyr Met Lys Glu Arg Lys Gly Phe Asn Leu Gln Gly Pro  
 20 25 30

Leu Ile Leu Trp Ser Phe Cys Leu Ala Ile Phe Ser Ile Leu Gly Ala  
                   35                                  40                                  45  
 Val Arg Met Trp Gly Ile Met Gly Thr Val Leu Leu Thr Gly Gly Leu  
                   50                                  55                                  60  
 Lys Gln Thr Val Cys Phe Ile Asn Phe Ile Asp Asn Ser Thr Val Lys  
                   65                                  70                                  75                                  80  
 Phe Trp Ser Trp Val Phe Leu Leu Ser Lys Val Ile Glu Leu Gly Asp  
                                   85                                  90                                  95  
 Thr Ala Phe Ile Ile Leu Arg Lys Arg Pro Leu Ile Phe Ile His Trp  
                                   100                                  105                                  110  
 Tyr His His Ser Thr Val Leu Val Tyr Thr Ser Phe Gly Tyr Lys Asn  
                   115                                  120                                  125  
 Lys Val Pro Ala Gly Gly Trp Phe Val Thr Met Asn Phe Gly Val His  
                   130                                  135                                  140  
 Ala Ile Met Tyr Thr Tyr Tyr Thr Leu Lys Ala Ala Asn Val Lys Pro  
                   145                                  150                                  155                                  160  
 Pro Lys Met Leu Pro Met Leu Ile Thr Ser Leu Gln Ile Leu Gln Met  
                                   165                                  170                                  175  
 Phe Val Gly Ala Ile Val Ser Ile Leu Thr Tyr Ile Trp Arg Gln Asp  
                                   180                                  185                                  190  
 Gln Gly Cys His Thr Thr Met Glu His Leu Phe Trp Ser Phe Ile Leu  
                   195                                  200                                  205  
 Tyr Met Thr Tyr Phe Ile Leu Phe Ala His Phe Phe Cys Gln Thr Tyr  
                   210                                  215                                  220  
 Ile Arg Pro Lys Val Lys Ala Lys Thr Lys Ser Gln  
                   225                                  230                                  235

<210> 107  
 <211> 271  
 <212> PRT  
 <213> Mus musculus

<400> 107  
 Met Asp Thr Ser Met Asn Phe Ser Arg Gly Leu Lys Met Asp Leu Met  
                   1                                  5                                  10                                  15  
 Gln Pro Tyr Asp Phe Glu Thr Phe Gln Asp Leu Arg Pro Phe Leu Glu  
                                   20                                  25                                  30  
 Glu Tyr Trp Val Ser Ser Phe Leu Ile Val Val Val Tyr Leu Leu Leu  
                   35                                  40                                  45  
 Ile Val Val Gly Gln Thr Tyr Met Arg Thr Arg Lys Ser Phe Ser Leu  
                   50                                  55                                  60

Gln	Arg	Pro	Leu	Ile	Leu	Trp	Ser	Phe	Phe	Leu	Ala	Ile	Phe	Ser	Ile	65	70	75	80
Leu	Gly	Thr	Leu	Arg	Met	Trp	Lys	Phe	Met	Ala	Thr	Val	Met	Phe	Thr	85	90	95	
Val	Gly	Leu	Lys	Gln	Thr	Val	Cys	Phe	Ala	Ile	Tyr	Thr	Asp	Asp	Ala	100	105	110	
Val	Val	Arg	Phe	Trp	Ser	Phe	Leu	Phe	Leu	Leu	Ser	Lys	Val	Val	Glu	115	120	125	
Leu	Gly	Asp	Thr	Ala	Phe	Ile	Ile	Leu	Arg	Lys	Arg	Pro	Leu	Ile	Phe	130	135	140	
Val	His	Trp	Tyr	His	His	Ser	Thr	Val	Leu	Leu	Phe	Thr	Ser	Phe	Gly	145	150	155	160
Tyr	Lys	Asn	Lys	Val	Pro	Ser	Gly	Gly	Trp	Phe	Met	Thr	Met	Asn	Phe	165	170	175	
Gly	Val	His	Ser	Val	Met	Tyr	Thr	Tyr	Tyr	Thr	Met	Lys	Ala	Ala	Lys	180	185	190	
Leu	Lys	His	Pro	Asn	Leu	Leu	Pro	Met	Val	Ile	Thr	Ser	Leu	Gln	Ile	195	200	205	
Leu	Gln	Met	Val	Leu	Gly	Thr	Ile	Phe	Gly	Ile	Leu	Asn	Tyr	Ile	Trp	210	215	220	
Arg	Gln	Glu	Lys	Gly	Cys	His	Thr	Thr	Thr	Glu	His	Phe	Phe	Trp	Ser	225	230	235	240
Phe	Met	Leu	Tyr	Gly	Thr	Tyr	Phe	Ile	Leu	Phe	Ala	His	Phe	Phe	His	245	250	255	
Arg	Ala	Tyr	Leu	Arg	Pro	Lys	Gly	Lys	Val	Ala	Ser	Lys	Ser	Gln	260	265	270		

<210> 108

<211> 360

<212> PRT

<213> Mus musculus

<220>

<221> VARIANT

<222> (19)

<223> Wherein Xaa is any amino acid as defined in the specification

<220>

<221> VARIANT

<222> (41)

<223> Wherein Xaa is any amino acid as defined in the specification

<220>

<221> VARIANT

<222> (166)

<223> Wherein Xaa is any amino acid as defined in the  
specification

<400> 108

Pro Cys Cys Val Phe Pro Leu Phe Trp Val Phe Ala Gly Ala Trp Pro  
1 5 10 15  
Phe Cys Xaa Leu Leu Phe Phe Phe Phe Pro Asn His Gly Ala Gly Pro  
20 25 30  
Ala Arg Gly Gly Leu Val Cys Ser Xaa Val Pro Gly Ser Gly Ala Leu  
35 40 45  
Leu Leu Ile Leu His Phe Phe Leu Ser Trp Val Ser Ser Ser Leu Gly  
50 55 60  
Pro Pro Pro Ser Ser Ser Ser Leu Ala Leu Ala Pro Leu Pro Ser Pro  
65 70 75 80  
Ser Ser Val Pro Arg Arg Leu Arg Gly Arg Gly Gly His Leu Pro Gly  
85 90 95  
Phe Leu Pro Arg Val Trp Leu Gly Leu Cys Pro Leu Trp Leu Arg Asp  
100 105 110  
Val Ser Gly Leu Trp Ala Leu Phe Gly Gly Val Leu Gly Ala Leu Leu  
115 120 125  
Ser Pro Cys Gly Arg Leu Ser Val Ala Pro Arg Cys Trp Pro Gly Leu  
130 135 140  
Pro Gly Gly Ala Gly Ala Leu Pro Leu Ala Glu Pro Leu Ile Leu Trp  
145 150 155 160  
Ser Phe Phe Leu Ala Xaa Phe Arg Phe Leu Gly Ala Leu Gly Val Trp  
165 170 175  
Lys Phe Met Ala Thr Val Met Phe Thr Val Gly Leu Lys Gln Thr Val  
180 185 190  
Cys Phe Ala Leu Tyr Thr Asp Asp Ala Val Val Arg Phe Trp Ser Phe  
195 200 205  
Leu Phe Leu Leu Ser Lys Val Val Glu Leu Gly Asp Thr Ala Phe Ile  
210 215 220  
Ile Leu Arg Lys Arg Pro Leu Ile Phe Val His Trp Tyr His His Ser  
225 230 235 240  
Thr Val Leu Leu Phe Thr Ser Phe Gly Tyr Lys Asn Lys Val Pro Ser  
245 250 255  
Gly Gly Trp Phe Met Thr Met Asn Phe Gly Val His Ser Val Met Tyr

260					265					270					
Thr	Tyr	Tyr	Thr	Met	Lys	Ala	Ala	Lys	Leu	Lys	His	Pro	Asn	Leu	Leu
		275					280					285			
Pro	Met	Val	Ile	Thr	Ser	Leu	Gln	Ile	Leu	Gln	Met	Val	Leu	Gly	Thr
		290					295					300			
Ile	Phe	Gly	Ile	Leu	Asn	Tyr	Ile	Trp	Arg	Gln	Glu	Lys	Gly	Cys	His
							310					315			320
Thr	Thr	Thr	Glu	His	Phe	Phe	Trp	Ser	Phe	Met	Leu	Tyr	Gly	Thr	Tyr
				325					330					335	
Phe	Ile	Leu	Phe	Ala	His	Phe	Phe	His	Arg	Ala	Tyr	Leu	Arg	Pro	Lys
				340					345					350	
Gly	Lys	Val	Ala	Ser	Lys	Ser	Gln								
		355					360								

<210> 109  
 <211> 265  
 <212> PRT  
 <213> Homo sapiens

<400> 109															
Met	Asn	Met	Ser	Val	Leu	Thr	Leu	Gln	Glu	Tyr	Glu	Phe	Glu	Lys	Gln
1				5					10					15	
Phe	Asn	Glu	Asn	Glu	Ala	Ile	Gln	Trp	Met	Gln	Glu	Asn	Trp	Lys	Lys
			20					25					30		
Ser	Phe	Leu	Phe	Ser	Ala	Leu	Tyr	Ala	Ala	Phe	Ile	Phe	Gly	Gly	Arg
		35					40					45			
His	Leu	Met	Asn	Lys	Arg	Ala	Lys	Phe	Glu	Leu	Arg	Lys	Pro	Leu	Val
	50					55					60				
Leu	Trp	Ser	Leu	Thr	Leu	Ala	Val	Phe	Ser	Ile	Phe	Gly	Ala	Leu	Arg
65					70					75					80
Thr	Gly	Ala	Tyr	Met	Val	Tyr	Ile	Leu	Met	Thr	Lys	Gly	Leu	Lys	Gln
				85					90					95	
Ser	Val	Cys	Asp	Gln	Gly	Phe	Tyr	Asn	Gly	Pro	Val	Ser	Lys	Phe	Trp
			100					105					110		
Ala	Tyr	Ala	Phe	Val	Leu	Ser	Lys	Ala	Pro	Glu	Leu	Gly	Asp	Thr	Ile
		115					120					125			
Phe	Ile	Ile	Leu	Arg	Lys	Gln	Lys	Leu	Ile	Phe	Leu	His	Trp	Tyr	His
	130					135					140				
His	Ile	Thr	Val	Leu	Leu	Tyr	Ser	Trp	Tyr	Ser	Tyr	Lys	Asp	Met	Val
145					150					155					160

Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val  
165 170 175

Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val Ser Arg  
180 185 190

Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met  
195 200 205

Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His Asp Gln  
210 215 220

Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met Tyr Leu  
225 230 235 240

Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr Ile Gly  
245 250 255

Lys Met Arg Lys Thr Thr Lys Ala Glu  
260 265

<210> 110  
<211> 267  
<212> PRT  
<213> Mus musculus

<400> 110  
Met Asn Met Ser Val Leu Thr Leu Gln Glu Tyr Glu Phe Glu Lys Gln  
1 5 10 15

Phe Asn Glu Asn Glu Ala Ile Gln Trp Met Gln Glu Asn Trp Lys Lys  
20 25 30

Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly Gly Arg  
35 40 45

His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro Leu Val  
50 55 60

Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala Leu Arg  
65 70 75 80

Thr Gly Ala Tyr Met Leu Tyr Ile Leu Met Thr Lys Gly Leu Lys Gln  
85 90 95

Ser Val Cys Asp Gln Ser Phe Tyr Asn Gly Pro Val Ser Lys Phe Trp  
100 105 110

Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr Ile  
115 120 125

Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp Tyr His  
130 135 140

His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp Met Val  
145 150 155 160



Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val  
165 170 175

Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val Ser Arg  
180 185 190

Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met  
195 200 205

Gly Cys Val Ile Asn Tyr Leu Val Phe Asn Trp Met Gln His Asp Asn  
210 215 220

Asp Gln Cys Tyr Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met  
225 230 235 240

Tyr Leu Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr  
245 250 255

Ile Gly Lys Val Lys Lys Ala Thr Lys Ala Glu  
260 265

<210> 111  
<211> 526  
<212> PRT  
<213> Homo sapiens

<400> 111  
Met Ala His Tyr Ile Thr Phe Leu Cys Met Val Leu Val Leu Leu Leu  
1 5 10 15

Gln Asn Ser Val Leu Ala Glu Asp Gly Glu Val Arg Ser Ser Cys Arg  
20 25 30

Thr Ala Pro Thr Asp Leu Val Phe Ile Leu Asp Gly Ser Tyr Ser Val  
35 40 45

Gly Pro Glu Asn Phe Glu Ile Val Lys Lys Trp Leu Val Asn Ile Thr  
50 55 60

Lys Asn Phe Asp Ile Gly Pro Lys Phe Ile Gln Val Gly Val Val Gln  
65 70 75 80

Tyr Ser Asp Tyr Pro Val Leu Glu Ile Pro Leu Gly Ser Tyr Asp Ser  
85 90 95

Gly Glu His Leu Thr Ala Ala Val Glu Ser Ile Leu Tyr Leu Gly Gly  
100 105 110

Asn Thr Lys Thr Gly Lys Ala Ile Gln Phe Ala Leu Asp Tyr Leu Phe  
115 120 125

Ala Lys Ser Ser Arg Phe Leu Thr Lys Ile Ala Val Val Leu Thr Asp  
130 135 140

Gly Lys Ser Gln Asp Asp Val Lys Asp Ala Ala Gln Ala Ala Arg Asp

145		150		155		160
Ser Lys Ile Thr	Leu Phe Ala Ile Gly Val Gly Ser Glu Thr Glu Asp					
	165			170		175
Ala Glu Leu Arg	Ala Ile Ala Asn Lys Pro Ser Ser Thr Tyr Val Phe					
	180		185			190
Tyr Val Glu Asp Tyr	Ile Ala Ile Ser Lys Ile Arg Glu Val Met Lys					
	195		200		205	
Gln Lys Leu Cys Glu	Glu Ser Val Cys Pro Thr Arg Ile Pro Val Ala					
	210		215		220	
Ala Arg Asp Glu Arg	Gly Phe Asp Ile Leu Leu Gly Leu Asp Val Asn					
	225		230		235	240
Lys Lys Val Lys	Lys Arg Ile Gln Leu Ser Pro Lys Lys Ile Lys Gly					
	245		250			255
Tyr Glu Val Thr	Ser Lys Val Asp Leu Ser Glu Leu Thr Ser Asn Val					
	260		265			270
Phe Pro Glu Gly	Leu Pro Pro Ser Tyr Val Phe Val Ser Thr Gln Arg					
	275		280		285	
Phe Lys Val Lys	Lys Ile Trp Asp Leu Trp Arg Ile Leu Thr Ile Asp					
	290		295		300	
Gly Arg Pro Gln	Ile Ala Val Thr Leu Asn Gly Val Asp Lys Ile Leu					
	305		310		315	320
Leu Phe Thr Thr	Thr Ser Val Ile Asn Gly Ser Gln Val Val Thr Phe					
	325		330			335
Ala Asn Pro Gln	Val Lys Thr Leu Phe Asp Glu Gly Trp His Gln Ile					
	340		345		350	
Arg Leu Leu Val	Thr Glu Gln Asp Val Thr Leu Tyr Ile Asp Asp Gln					
	355		360		365	
Gln Ile Glu Asn	Lys Pro Leu His Pro Val Leu Gly Ile Leu Ile Asn					
	370		375		380	
Gly Gln Thr Gln	Ile Gly Lys Tyr Ser Gly Lys Glu Glu Thr Val Gln					
	385		390		395	400
Phe Asp Val Gln	Lys Leu Arg Ile Tyr Cys Asp Pro Glu Gln Asn Asn					
	405		410		415	
Arg Glu Thr Ala	Cys Glu Ile Pro Gly Phe Cys Leu Asn Gly Pro Ser					
	420		425		430	
Asp Val Gly Ser	Thr Pro Ala Pro Cys Ile Cys Pro Pro Gly Lys Pro					
	435		440		445	
Gly Leu Gln Gly	Pro Lys Gly Asp Pro Gly Leu Pro Gly Asn Pro Gly					

450		455		460											
Tyr	Pro	Gly	Gln	Pro	Gly	Gln	Asp	Gly	Lys	Pro	Val	Ser	Thr	Glu	Ser
465					470					475					480
Leu	Val	Ile	Ser	Gly	Ile	Ser	Gly	Ile	Thr	Gly	Tyr	Gln	Gly	Ile	Ala
				485					490						495
Gly	Thr	Pro	Gly	Val	Pro	Gly	Ser	Pro	Gly	Ile	Gln	Gly	Ala	Arg	Gly
			500					505					510		
Leu	Pro	Gly	Tyr	Lys	Gly	Glu	Pro	Gly	Arg	Asp	Gly	Asp	Lys		
		515					520					525			

<210> 112  
 <211> 496  
 <212> PRT  
 <213> Homo sapiens

<400> 112

Met	Arg	Val	Leu	Ser	Gly	Thr	Ser	Leu	Met	Leu	Cys	Ser	Leu	Leu	Leu
1				5					10					15	
Leu	Leu	Gln	Ala	Leu	Cys	Ser	Pro	Gly	Leu	Ala	Pro	Gln	Ser	Arg	Gly
		20						25					30		
His	Leu	Cys	Arg	Thr	Arg	Pro	Thr	Asp	Leu	Val	Phe	Val	Val	Asp	Ser
		35					40					45			
Ser	Arg	Ser	Val	Arg	Pro	Val	Glu	Phe	Glu	Lys	Val	Lys	Val	Phe	Leu
	50					55					60				
Ser	Gln	Val	Ile	Glu	Ser	Leu	Asp	Val	Gly	Pro	Asn	Ala	Thr	Arg	Val
65					70				75					80	
Gly	Met	Val	Asn	Tyr	Ala	Ser	Thr	Val	Lys	Gln	Glu	Phe	Ser	Leu	Arg
			85						90					95	
Ala	His	Val	Ser	Lys	Ala	Ala	Leu	Leu	Gln	Ala	Val	Arg	Arg	Ile	Gln
		100					105						110		
Pro	Leu	Ser	Thr	Gly	Thr	Met	Thr	Gly	Leu	Ala	Ile	Gln	Phe	Ala	Ile
	115					120						125			
Thr	Lys	Ala	Phe	Gly	Asp	Ala	Glu	Gly	Gly	Arg	Ser	Arg	Ser	Pro	Asp
	130					135					140				
Ile	Ser	Lys	Val	Val	Ile	Val	Val	Thr	Asp	Gly	Arg	Pro	Gln	Asp	Ser
145					150					155				160	
Val	Gln	Asp	Val	Ser	Ala	Arg	Ala	Arg	Ala	Ser	Gly	Val	Glu	Leu	Phe
			165						170					175	
Ala	Ile	Gly	Val	Gly	Ser	Val	Asp	Lys	Ala	Thr	Leu	Arg	Gln	Ile	Ala
			180					185					190		

Ser Glu Pro Gln Asp Glu His Val Asp Tyr Val Glu Ser Tyr Ser Val  
 195 200 205  
 Ile Glu Lys Leu Ser Arg Lys Phe Gln Glu Ala Phe Cys Val Val Ser  
 210 215 220  
 Asp Leu Cys Ala Thr Gly Asp His Asp Cys Glu Gln Val Cys Ile Ser  
 225 230 235 240  
 Ser Pro Gly Ser Tyr Thr Cys Ala Cys His Glu Gly Phe Thr Leu Asn  
 245 250 255  
 Ser Asp Gly Lys Thr Cys Asn Val Cys Ser Gly Gly Gly Gly Ser Ser  
 260 265 270  
 Ala Thr Asp Leu Val Phe Leu Ile Asp Gly Ser Lys Ser Val Arg Pro  
 275 280 285  
 Glu Asn Phe Glu Leu Val Lys Lys Phe Ile Ser Gln Ile Val Asp Thr  
 290 295 300  
 Leu Asp Val Ser Asp Lys Leu Ala Gln Val Gly Leu Val Gln Tyr Ser  
 305 310 315 320  
 Ser Ser Val Arg Gln Glu Phe Pro Leu Gly Arg Phe His Thr Lys Lys  
 325 330 335  
 Asp Ile Lys Ala Ala Val Arg Asn Met Ser Tyr Met Glu Lys Gly Thr  
 340 345 350  
 Met Thr Gly Ala Ala Leu Lys Tyr Leu Ile Asp Asn Ser Phe Thr Val  
 355 360 365  
 Ser Ser Gly Ala Arg Pro Gly Ala Gln Lys Val Gly Ile Val Phe Thr  
 370 375 380  
 Asp Gly Arg Ser Gln Asp Tyr Ile Asn Asp Ala Ala Lys Lys Ala Lys  
 385 390 395 400  
 Asp Leu Gly Phe Lys Met Phe Ala Val Gly Val Gly Asn Ala Val Glu  
 405 410 415  
 Asp Glu Leu Arg Glu Ile Ala Ser Glu Pro Val Ala Glu His Tyr Phe  
 420 425 430  
 Tyr Thr Ala Asp Phe Lys Thr Ile Asn Gln Ile Gly Lys Lys Leu Gln  
 435 440 445  
 Lys Lys Ile Cys Val Glu Glu Asp Pro Cys Ala Cys Glu Ser Leu Val  
 450 455 460  
 Lys Phe Gln Ala Lys Val Glu Gly Leu Leu Gln Ala Leu Thr Arg Lys  
 465 470 475 480  
 Leu Glu Ala Val Ser Lys Arg Leu Ala Ile Leu Glu Asn Thr Val Val  
 485 490 495

<210> 113  
 <211> 500  
 <212> PRT  
 <213> Mus musculus

<400> 113  
 Met Lys Val Thr Ser Gly Pro Ala Ser Ala Leu Cys Ser Leu Leu Leu  
           1                  5                  10                  15  
 Leu Leu Leu Leu Leu Leu Gln Val Pro Asp Ser Leu Ser Leu Val Pro  
                   20                  25                  30  
 Gln Pro Arg Gly His Leu Cys Arg Thr Arg Pro Thr Asp Leu Val Phe  
                   35                  40                  45  
 Val Val Asp Ser Ser Arg Ser Val Arg Pro Val Glu Phe Glu Lys Val  
           50                  55                  60  
 Lys Val Phe Leu Ser Gln Val Ile Glu Ser Leu Asp Val Gly Pro Asn  
           65                  70                  75                  80  
 Ala Thr Arg Val Gly Leu Val Asn Tyr Ala Ser Thr Val Lys Pro Glu  
                   85                  90                  95  
 Phe Pro Leu Arg Ala His Gly Ser Lys Ala Ser Leu Leu Gln Ala Val  
                   100                  105                  110  
 Arg Arg Ile Gln Pro Leu Ser Thr Gly Thr Met Thr Gly Leu Ala Leu  
           115                  120                  125  
 Gln Phe Ala Ile Thr Lys Ala Leu Ser Asp Ala Glu Gly Gly Arg Ala  
           130                  135                  140  
 Arg Ser Pro Asp Ile Ser Lys Val Val Ile Val Val Thr Asp Gly Arg  
           145                  150                  155                  160  
 Pro Gln Asp Ser Val Arg Asp Val Ser Glu Arg Ala Arg Ala Ser Gly  
                   165                  170                  175  
 Ile Glu Leu Phe Ala Ile Gly Leu Gly Arg Val Asp Lys Ala Thr Leu  
                   180                  185                  190  
 Arg Gln Ile Ala Ser Glu Pro Gln Asp Glu His Val Asp Tyr Val Glu  
           195                  200                  205  
 Ser Tyr Asn Val Ile Glu Lys Leu Ala Lys Lys Phe Gln Glu Ala Phe  
           210                  215                  220  
 Cys Val Val Ser Asp Leu Cys Ala Thr Gly Asp His Asp Cys Glu Gln  
           225                  230                  235                  240  
 Leu Cys Val Ser Ser Pro Gly Ser Tyr Thr Cys Ala Cys His Glu Gly  
                   245                  250                  255

Phe Thr Leu Asn Ser Asp Gly Lys Thr Cys Asn Val Cys Arg Gly Gly  
 260 265 270  
 Gly Ser Gly Ser Ala Thr Asp Leu Val Phe Leu Ile Asp Gly Ser Lys  
 275 280 285  
 Ser Val Arg Pro Glu Asn Phe Glu Leu Val Lys Lys Phe Ile Asn Gln  
 290 295 300  
 Ile Val Asp Thr Leu Asp Val Ser Asp Arg Leu Ala Gln Val Gly Leu  
 305 310 315 320  
 Val Gln Tyr Ser Ser Ser Ile Arg Gln Glu Phe Pro Leu Gly Arg Phe  
 325 330 335  
 His Ser Lys Lys Asp Ile Lys Ala Arg Val Arg Asn Met Ser Tyr Met  
 340 345 350  
 Glu Lys Gly Thr Met Thr Gly Ala Ala Leu Lys Tyr Leu Ile Asp Asn  
 355 360 365  
 Ser Phe Thr Val Ser Ser Gly Ala Arg Pro Gly Ala Gln Lys Val Gly  
 370 375 380  
 Ile Val Phe Thr Asp Gly Arg Ser Gln Asp Tyr Ile Asn Asp Ala Ala  
 385 390 395 400  
 Arg Lys Ala Lys Asp Leu Gly Phe Lys Met Phe Ala Val Gly Val Gly  
 405 410 415  
 Asn Ala Val Glu Glu Glu Leu Arg Glu Ile Ala Ser Glu Pro Val Ala  
 420 425 430  
 Asp His Tyr Phe Tyr Thr Ala Asp Phe Lys Thr Ile Asn Gln Ile Gly  
 435 440 445  
 Lys Lys Leu Gln Lys Gln Ile Cys Val Glu Glu Asp Pro Cys Ala Cys  
 450 455 460  
 Glu Ser Ile Leu Lys Phe Glu Ala Lys Val Glu Gly Leu Leu Gln Ala  
 465 470 475 480  
 Leu Thr Arg Lys Leu Glu Ala Val Ser Gly Arg Leu Ala Val Leu Glu  
 485 490 495  
 Asn Arg Ile Ile  
 500

<210> 114  
 <211> 416  
 <212> PRT  
 <213> Gallus gallus

<400> 114  
 Val Gly Val Ile Asn Tyr Ala Ser Ala Val Lys Asn Glu Phe Ser Leu

1	5	10	15
Lys Thr His	Gln Thr Lys	Ala Glu Leu	Leu Gln Ala Val Gln Arg Ile
20		25	30
Glu Pro Leu	Ser Thr Gly	Thr Met Thr	Gly Leu Ala Ile Gln Phe Ala
35		40	45
Ile Ser Arg	Ala Phe Ser	Asp Thr Glu	Gly Ala Arg Leu Arg Ser Pro
50		55	60
Asn Ile Asn	Lys Val Ala	Ile Val Val	Thr Asp Gly Arg Pro Gln Asp
65		70	75
Gly Val Gln	Asp Val Ser	Ala Arg Ala	Arg Gln Ala Gly Ile Glu Ile
85		90	95
Phe Ala Ile	Gly Val Gly	Arg Val Asp	Met His Thr Leu Arg Gln Ile
100		105	110
Ala Ser Glu	Pro Leu Asp	Asp His Val	Asp Tyr Val Glu Ser Tyr Ser
115		120	125
Val Ile Glu	Lys Leu Thr	His Lys Phe	Gln Glu Ala Phe Cys Val Val
130		135	140
Ser Asp Leu	Cys Ala Thr	Gly Asp His	Asp Cys Glu Gln Ile Cys Ile
145		150	155
Ser Thr Pro	Gly Ser Tyr	Lys Cys Ala	Cys Lys Glu Gly Phe Thr Leu
165		170	175
Asn Asn Asp	Gly Lys Thr	Cys Ser Ala	Cys Ser Gly Gly Ser Gly Ser
180		185	190
Ala Leu Asp	Leu Val Phe	Leu Ile Asp	Gly Ser Lys Ser Val Arg Pro
195		200	205
Glu Asn Phe	Glu Leu Val	Lys Lys Phe	Ile Asn Gln Ile Val Glu Ser
210		215	220
Leu Glu Val	Ser Glu Lys	Gln Ala Gln	Val Gly Leu Val Gln Tyr Ser
225		230	235
Ser Ser Val	Arg Gln Glu	Phe Pro Leu	Gly Gln Phe Lys Asn Lys Lys
245		250	255
Asp Ile Lys	Ala Ala Val	Lys Lys Met	Ala Tyr Met Glu Lys Gly Thr
260		265	270
Met Thr Gly	Gln Ala Leu	Lys Tyr Leu	Val Asp Ser Ser Phe Ser Ile
275		280	285
Ala Asn Gly	Ala Arg Pro	Gly Val Pro	Lys Val Gly Ile Val Phe Thr
290		295	300
Asp Gly Arg	Ser Gln Asp	Tyr Ile Thr	Asp Ala Ala Lys Lys Ala Lys

305		310		315		320									
Asp	Leu	Gly	Phe	Arg	Met	Phe	Ala	Val	Gly	Val	Gly	Asn	Ala	Val	Glu
				325					330					335	
Asp	Glu	Leu	Arg	Glu	Ile	Ala	Ser	Glu	Pro	Val	Ala	Glu	His	Tyr	Phe
			340					345					350		
Tyr	Thr	Ala	Asp	Phe	Arg	Thr	Ile	Ser	Asn	Ile	Gly	Lys	Lys	Leu	Gln
		355					360					365			
Met	Lys	Ile	Cys	Val	Glu	Glu	Asp	Pro	Cys	Glu	Cys	Lys	Ser	Ile	Val
	370					375					380				
Lys	Phe	Gln	Thr	Lys	Val	Glu	Glu	Leu	Ile	Asn	Thr	Leu	Gln	Gln	Lys
385					390					395					400
Leu	Glu	Ala	Val	Ala	Lys	Arg	Ile	Glu	Ala	Leu	Glu	Asn	Lys	Ile	Ile
			405						410					415	

<210> 115  
 <211> 493  
 <212> PRT  
 <213> Gallus gallus

<400> 115

Met	Asp	Gly	Ile	Phe	Cys	Ala	Leu	Pro	Leu	Ser	Leu	Leu	Leu	Leu	Leu
1				5					10					15	
Gln	Ser	Cys	Gly	Val	Trp	Gly	Ala	Pro	Pro	Gln	Pro	Arg	Gly	Thr	Leu
			20					25					30		
Cys	Arg	Thr	Lys	Pro	Thr	Asp	Leu	Val	Phe	Ile	Ile	Asp	Ser	Ser	Arg
		35					40					45			
Ser	Val	Arg	Pro	Gln	Glu	Phe	Glu	Lys	Val	Lys	Val	Phe	Leu	Ser	Arg
	50					55					60				
Val	Ile	Glu	Gly	Leu	Asp	Val	Gly	Pro	Asn	Ser	Thr	Arg	Val	Gly	Val
65					70					75					80
Ile	Asn	Tyr	Ala	Ser	Ala	Val	Lys	Asn	Glu	Phe	Ser	Leu	Lys	Thr	His
			85						90					95	
Gln	Thr	Lys	Ala	Glu	Leu	Leu	Gln	Ala	Val	Gln	Arg	Ile	Glu	Pro	Leu
			100					105					110		
Ser	Thr	Gly	Thr	Met	Thr	Gly	Leu	Ala	Ile	Gln	Phe	Ala	Ile	Ser	Arg
		115					120					125			
Ala	Phe	Ser	Asp	Thr	Glu	Gly	Ala	Arg	Leu	Arg	Ser	Pro	Asn	Ile	Asn
	130					135					140				



Lys Val Ala Ile Val Val Thr Asp Gly Arg Pro Gln Asp Gly Val Gln  
 145 150 155 160  
 Asp Val Ser Ala Arg Ala Arg Gln Ala Gly Ile Glu Ile Phe Ala Ile  
 165 170 175  
 Gly Val Gly Arg Val Asp Met His Thr Leu Arg Gln Ile Ala Ser Glu  
 180 185 190  
 Pro Leu Asp Asp His Val Asp Tyr Val Glu Ser Tyr Ser Val Ile Glu  
 195 200 205  
 Lys Leu Thr His Lys Phe Gln Glu Ala Phe Cys Val Val Ser Asp Leu  
 210 215 220  
 Cys Ala Thr Gly Asp His Asp Cys Glu Gln Ile Cys Ile Ser Thr Pro  
 225 230 235 240  
 Gly Ser Tyr Lys Cys Ala Cys Lys Glu Gly Phe Thr Leu Asn Asn Asp  
 245 250 255  
 Gly Lys Thr Cys Ser Ala Cys Ser Gly Gly Ser Gly Ser Ala Leu Asp  
 260 265 270  
 Leu Val Phe Leu Ile Asp Gly Ser Lys Ser Val Arg Pro Glu Asn Phe  
 275 280 285  
 Glu Leu Val Lys Lys Phe Ile Asn Gln Ile Val Glu Ser Leu Glu Val  
 290 295 300  
 Ser Glu Lys Gln Ala Gln Val Gly Leu Val Gln Tyr Ser Ser Ser Val  
 305 310 315 320  
 Arg Gln Glu Phe Pro Leu Gly Gln Phe Lys Asn Lys Lys Asp Ile Lys  
 325 330 335  
 Ala Ala Val Lys Lys Met Ala Tyr Met Glu Lys Gly Thr Met Thr Gly  
 340 345 350  
 Gln Ala Leu Lys Tyr Leu Val Asp Ser Ser Phe Ser Ile Ala Asn Gly  
 355 360 365  
 Ala Arg Pro Gly Val Pro Lys Val Gly Ile Val Phe Thr Asp Gly Arg  
 370 375 380  
 Ser Gln Asp Tyr Ile Thr Asp Ala Ala Lys Lys Ala Lys Asp Leu Gly  
 385 390 395 400  
 Phe Arg Met Phe Ala Val Gly Val Gly Asn Ala Val Glu Asp Glu Leu  
 405 410 415  
 Arg Glu Ile Ala Ser Glu Pro Val Ala Glu His Tyr Phe Tyr Thr Ala  
 420 425 430  
 Asp Phe Arg Thr Ile Ser Asn Ile Gly Lys Lys Leu Gln Met Lys Ile  
 435 440 445

Cys Val Glu Glu Asp Pro Cys Glu Cys Lys Ser Ile Val Lys Phe Gln  
 450 455 460

Thr Lys Val Glu Glu Leu Ile Asn Thr Leu Gln Gln Lys Leu Glu Ala  
 465 470 475 480

Val Ala Lys Arg Ile Glu Ala Leu Glu Asn Lys Ile Ile  
 485 490

<210> 116  
 <211> 219  
 <212> PRT  
 <213> Homo sapiens

<400> 116  
 Met Gly Met Ser Ser Leu Lys Leu Leu Lys Tyr Val Leu Phe Phe Phe  
 1 5 10 15  
 Asn Leu Leu Phe Trp Ile Cys Gly Cys Cys Ile Leu Gly Phe Gly Ile  
 20 25 30  
 Tyr Leu Leu Ile His Asn Asn Phe Gly Val Leu Phe His Asn Leu Pro  
 35 40 45  
 Ser Leu Thr Leu Gly Asn Val Phe Val Ile Val Gly Ser Ile Ile Met  
 50 55 60  
 Val Val Ala Phe Leu Gly Cys Met Gly Ser Ile Lys Glu Asn Lys Cys  
 65 70 75 80  
 Leu Leu Met Ser Phe Phe Ile Leu Leu Leu Ile Ile Leu Leu Ala Glu  
 85 90 95  
 Val Thr Leu Ala Ile Leu Leu Phe Val Tyr Glu Gln Lys Leu Asn Glu  
 100 105 110  
 Tyr Val Ala Lys Gly Leu Thr Asp Ser Ile His Arg Tyr His Ser Asp  
 115 120 125  
 Asn Ser Thr Lys Ala Ala Trp Asp Ser Ile Gln Ser Phe Leu Gln Cys  
 130 135 140  
 Cys Gly Ile Asn Gly Thr Ser Asp Trp Thr Ser Gly Pro Pro Ala Ser  
 145 150 155 160  
 Cys Pro Ser Asp Arg Lys Val Glu Gly Cys Tyr Ala Lys Ala Arg Leu  
 165 170 175  
 Trp Phe His Ser Asn Phe Leu Tyr Ile Gly Ile Ile Thr Ile Cys Val  
 180 185 190  
 Cys Val Ile Glu Val Leu Gly Met Ser Phe Ala Leu Thr Leu Asn Cys  
 195 200 205  
 Gln Ile Asp Lys Thr Ser Gln Thr Ile Gly Leu  
 210 215

<210> 117  
 <211> 219  
 <212> PRT  
 <213> Rattus norvegicus

<400> 117  
 Met Gly Met Ser Ser Leu Lys Leu Leu Lys Tyr Val Leu Phe Phe Phe  
     1                    5                    10                    15  
 Asn Phe Leu Phe Trp Val Cys Gly Cys Cys Ile Leu Gly Phe Gly Ile  
             20                    25                    30  
 His Leu Leu Val Gln Asn Thr Tyr Gly Ile Leu Phe Arg Asn Leu Pro  
             35                    40                    45  
 Phe Leu Thr Leu Gly Asn Val Leu Val Ile Val Gly Ser Ile Ile Met  
             50                    55                    60  
 Val Val Ala Phe Leu Gly Cys Met Gly Ser Ile Lys Glu Asn Lys Cys  
             65                    70                    75                    80  
 Leu Leu Met Ser Phe Phe Val Leu Leu Leu Leu Ile Leu Leu Ala Glu  
                     85                    90                    95  
 Val Thr Leu Ala Ile Leu Leu Phe Val Tyr Glu Lys Lys Ile Asn Thr  
             100                    105                    110  
 Leu Val Ala Glu Gly Leu Asn Asp Ser Ile Gln His Tyr His Ser Asp  
             115                    120                    125  
 Asn Ser Thr Arg Met Ala Trp Asp Phe Ile Gln Ser Gln Leu Gln Cys  
             130                    135                    140  
 Cys Gly Val Asn Gly Ser Ser Asp Trp Ile Ser Gly Pro Pro Ser Ser  
             145                    150                    155                    160  
 Cys Pro Ser Gly Ala Asp Val Gln Gly Cys Tyr Lys Lys Gly Gln Ala  
                     165                    170                    175  
 Trp Phe His Ser Asn Phe Leu Tyr Ile Gly Ile Val Thr Ile Cys Val  
             180                    185                    190  
 Cys Val Ile Gln Val Leu Gly Met Ser Phe Ala Leu Thr Leu Asn Cys  
             195                    200                    205  
 Gln Ile Asp Lys Thr Ser Gln Ala Leu Gly Leu  
             210                    215

<210> 118  
 <211> 219  
 <212> PRT  
 <213> Mus musculus

<400> 118

Met Gly Met Ser Ser Leu Lys Leu Leu Lys Tyr Val Leu Phe Ile Phe  
 1 5 10 15  
 Asn Leu Leu Phe Trp Val Cys Gly Cys Cys Ile Leu Gly Phe Gly Ile  
 20 25 30  
 Tyr Phe Leu Val Gln Asn Thr Tyr Gly Val Leu Phe Arg Asn Leu Pro  
 35 40 45  
 Phe Leu Thr Leu Gly Asn Ile Leu Val Ile Val Gly Ser Ile Ile Met  
 50 55 60  
 Val Val Ala Phe Leu Gly Cys Met Gly Ser Ile Lys Glu Asn Lys Cys  
 65 70 75 80  
 Leu Leu Met Ser Phe Phe Val Leu Leu Leu Ile Ile Leu Leu Ala Glu  
 85 90 95  
 Val Thr Ile Ala Ile Leu Leu Phe Val Tyr Glu Gln Lys Leu Asn Thr  
 100 105 110  
 Leu Val Ala Glu Gly Leu Asn Asp Ser Ile Gln His Tyr His Ser Asp  
 115 120 125  
 Asn Ser Thr Met Lys Ala Trp Asp Phe Ile Gln Thr Gln Leu Gln Cys  
 130 135 140  
 Cys Gly Val Asn Gly Ser Ser Asp Trp Thr Ser Gly Pro Pro Ser Ser  
 145 150 155 160  
 Cys Pro Ser Gly Ala Asp Val Gln Gly Cys Tyr Asn Lys Ala Lys Ser  
 165 170 175  
 Trp Phe His Ser Asn Phe Leu Tyr Ile Gly Ile Ile Thr Ile Cys Val  
 180 185 190  
 Cys Val Ile Gln Val Leu Gly Met Ser Phe Ala Leu Thr Leu Asn Cys  
 195 200 205  
 Gln Ile Asp Lys Thr Ser Gln Ala Leu Gly Leu  
 210 215

<210> 119  
 <211> 239  
 <212> PRT  
 <213> Homo sapiens

<400> 119  
 Met Ala Arg Gly Cys Leu Cys Cys Leu Lys Tyr Met Met Phe Leu Phe  
 1 5 10 15  
 Asn Leu Ile Phe Trp Leu Cys Gly Cys Gly Leu Leu Gly Val Gly Ile  
 20 25 30  
 Trp Leu Ser Val Ser Gln Gly Asn Phe Ala Thr Phe Ser Pro Ser Phe  
 35 40 45

Pro Ser Leu Ser Ala Ala Asn Leu Val Ile Ala Ile Gly Thr Ile Val  
 50 55 60  
 Met Val Thr Gly Phe Leu Gly Cys Leu Gly Ala Ile Lys Glu Asn Lys  
 65 70 75 80  
 Cys Leu Leu Leu Ser Phe Phe Ile Val Leu Leu Val Ile Leu Leu Ala  
 85 90 95  
 Glu Leu Ile Leu Leu Ile Leu Phe Phe Val Tyr Met Asp Lys Val Asn  
 100 105 110  
 Glu Asn Ala Lys Lys Asp Leu Lys Glu Gly Leu Leu Leu Tyr His Thr  
 115 120 125  
 Glu Asn Asn Val Gly Leu Lys Asn Ala Trp Asn Ile Ile Gln Ala Glu  
 130 135 140  
 Met Arg Cys Cys Gly Val Thr Asp Tyr Thr Asp Trp Tyr Pro Val Leu  
 145 150 155 160  
 Gly Glu Asn Thr Val Pro Asp Arg Cys Cys Met Glu Asn Ser Gln Gly  
 165 170 175  
 Cys Gly Arg Asn Ala Thr Thr Pro Leu Trp Arg Thr Gly Cys Tyr Glu  
 180 185 190  
 Lys Val Lys Met Trp Phe Asp Asp Asn Lys His Val Leu Gly Thr Val  
 195 200 205  
 Gly Met Cys Ile Leu Ile Met Gln Ile Leu Gly Met Ala Phe Ser Met  
 210 215 220  
 Thr Leu Phe Gln His Ile His Arg Thr Gly Lys Lys Tyr Asp Ala  
 225 230 235

<210> 120  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 120  
 Met Val Thr Gly Phe Leu Gly Cys Leu Gly Ala Ile Lys Glu Asn Lys  
 1 5 10 15  
 Cys Leu Leu Leu Ser Phe Phe Ile Val Leu Leu Val Ile Leu Leu Ala  
 20 25 30  
 Glu Leu Ile Leu Leu Ile Leu Phe Phe Val Tyr Met Asp Lys Val Asn  
 35 40 45  
 Glu Asn Ala Lys Lys Asp Leu Lys Glu Gly Leu Leu Leu Tyr His Thr  
 50 55 60  
 Glu Asn Asn Val Gly Leu Lys Asn Ala Trp Asn Ile Ile Gln Ala Glu

65		70		75		80
Met Arg Cys Cys Gly Val Thr Asp Tyr Thr Asp Trp Tyr Pro Val Leu						
	85			90		95
Gly Glu Asn Thr Val Pro Asp Arg Cys Cys Met Glu Asn Ser Gln Gly						
	100			105		110
Cys Gly Arg Asn Ala Thr Thr Pro Leu Trp Arg Thr Gly Cys Tyr Glu						
	115			120		125
Lys Val Lys Met Trp Phe Asp Asp Asn Lys His Val Leu Gly Thr Val						
	130			135		140
Gly Met Cys Ile Leu Ile Met Gln Ile Leu Gly Met Ala Phe Ser Met						
	145			150		155
Thr Leu Phe Gln His Ile His Arg Thr Gly Lys Lys Tyr Asp Ala						
	165			170		175

<210> 121  
 <211> 488  
 <212> PRT  
 <213> Homo sapiens

<400> 121
Met Glu Pro Phe Leu Arg Arg Arg Leu Ala Phe Leu Ser Phe Phe Trp
1 5 10 15
Asp Lys Ile Trp Pro Ala Gly Gly Glu Pro Asp His Gly Thr Pro Gly
20 25 30
Ser Leu Asp Pro Asn Thr Asp Pro Val Pro Thr Leu Pro Ala Glu Pro
35 40 45
Cys Ser Pro Phe Pro Gln Leu Phe Leu Ala Leu Tyr Asp Phe Thr Ala
50 55 60
Arg Cys Gly Gly Glu Leu Ser Val Arg Arg Gly Asp Arg Leu Cys Ala
65 70 75 80
Leu Glu Glu Gly Gly Gly Tyr Ile Phe Ala Arg Arg Leu Ser Gly Gln
85 90 95
Pro Ser Ala Gly Leu Val Pro Ile Thr His Val Ala Lys Ala Ser Pro
100 105 110
Glu Thr Leu Ser Asp Gln Pro Trp Tyr Phe Ser Gly Val Ser Arg Thr
115 120 125
Gln Ala Gln Gln Leu Leu Leu Ser Pro Pro Asn Glu Pro Gly Ala Phe
130 135 140
Leu Ile Arg Pro Ser Glu Ser Ser Leu Gly Gly Tyr Ser Leu Ser Val
145 150 155 160

Arg Ala Gln Ala Lys Val Cys His Tyr Arg Val Ser Met Ala Ala Asp  
 165 170 175  
 Gly Ser Leu Tyr Leu Gln Lys Gly Arg Leu Phe Pro Gly Leu Glu Glu  
 180 185 190  
 Leu Leu Thr Tyr Tyr Lys Ala Asn Trp Lys Leu Ile Gln Asn Pro Leu  
 195 200 205  
 Leu Gln Pro Cys Met Pro Gln Lys Ala Pro Arg Gln Asp Val Trp Glu  
 210 215 220  
 Arg Pro His Ser Glu Phe Ala Leu Gly Arg Lys Leu Gly Glu Gly Tyr  
 225 230 235 240  
 Phe Gly Glu Val Trp Glu Gly Leu Trp Leu Gly Ser Leu Pro Val Ala  
 245 250 255  
 Ile Lys Val Ile Lys Ser Ala Asn Met Lys Leu Thr Asp Leu Ala Lys  
 260 265 270  
 Glu Ile Gln Thr Leu Lys Gly Leu Arg His Glu Arg Leu Ile Arg Leu  
 275 280 285  
 His Ala Val Cys Ser Gly Gly Glu Pro Val Tyr Ile Val Thr Glu Leu  
 290 295 300  
 Met Arg Lys Gly Asn Leu Gln Ala Phe Leu Gly Thr Pro Glu Gly Arg  
 305 310 315 320  
 Ala Leu Arg Leu Pro Pro Leu Leu Gly Phe Ala Cys Gln Val Ala Glu  
 325 330 335  
 Gly Met Ser Tyr Leu Glu Glu Gln Arg Val Val His Arg Asp Leu Ala  
 340 345 350  
 Ala Arg Asn Val Leu Val Asp Asp Gly Leu Ala Cys Lys Val Ala Asp  
 355 360 365  
 Phe Gly Leu Ala Arg Leu Leu Lys Asp Asp Ile Tyr Ser Pro Ser Ser  
 370 375 380  
 Ser Ser Lys Ile Pro Val Lys Trp Thr Ala Pro Glu Ala Ala Asn Tyr  
 385 390 395 400  
 Arg Val Phe Ser Gln Lys Ser Asp Val Trp Ser Phe Gly Val Leu Leu  
 405 410 415  
 His Glu Val Phe Thr Tyr Gly Gln Cys Pro Tyr Glu Gly Met Thr Asn  
 420 425 430  
 His Glu Thr Leu Gln Gln Ile Met Arg Gly Tyr Arg Leu Pro Arg Pro  
 435 440 445  
 Ala Ala Cys Pro Ala Glu Val Tyr Val Leu Met Leu Glu Cys Trp Arg  
 450 455 460

Ser Ser Pro Glu Glu Arg Pro Ser Phe Ala Thr Leu Arg Glu Lys Leu  
 465 470 475 480

His Ala Ile His Arg Cys His Pro  
 485

<210> 122  
 <211> 496  
 <212> PRT  
 <213> Mus musculus

<400> 122  
 Met Glu Pro Phe Leu Arg Lys Arg Leu Thr Phe Leu Ser Phe Phe Trp  
 1 5 10 15  
 Asp Lys Ile Trp Pro Ala Asp Glu Ser Glu Glu Asp Ile Pro Arg Ile  
 20 25 30  
 Gln Gly His Asp Asp Asn Pro Val Pro Glu Gln Ala Ala Ala Val Glu  
 35 40 45  
 Pro Cys Ser Phe Pro Ala Pro Arg Ala Arg Leu Phe Arg Ala Leu Tyr  
 50 55 60  
 Asp Phe Thr Ala Arg Cys Ala Glu Glu Leu Ser Val Ser Arg Gly Asp  
 65 70 75 80  
 Arg Leu Tyr Ala Leu Lys Glu Glu Gly Asp Tyr Ile Phe Ala Gln Arg  
 85 90 95  
 Leu Ser Gly Pro Pro Ser Thr Gly Leu Val Pro Val Thr Tyr Leu Ala  
 100 105 110  
 Lys Ala Thr Pro Glu Pro Pro Ser Asp Gln Pro Trp Tyr Phe Ser Gly  
 115 120 125  
 Ile Ser Arg Ala Gln Ala Gln Gln Leu Leu Leu Ser Pro Ala Asn Ala  
 130 135 140  
 Pro Gly Ala Phe Leu Ile Arg Pro Ser Glu Ser Ser Ile Gly Gly Tyr  
 145 150 155 160  
 Ser Leu Ser Val Arg Ala Gln Ala Lys Val Cys His Tyr Arg Ile Cys  
 165 170 175  
 Met Ala Pro Ser Gly Ser Leu Tyr Leu Gln Glu Gly Gln Leu Phe Pro  
 180 185 190  
 Ser Leu Asp Ala Leu Leu Ala Tyr Tyr Lys Thr Asn Trp Lys Leu Ile  
 195 200 205  
 Gln Asn Pro Leu Leu Gln Pro Cys Ile Pro Gln Ile Pro Leu Val Gln  
 210 215 220  
 Asp Glu Trp Glu Arg Pro Arg Ser Glu Phe Val Leu Arg Arg Lys Leu  
 225 230 235 240





<400> 123

Met	Glu	Pro	Phe	Leu	Arg	Lys	Arg	Leu	Thr	Phe	Leu	Ser	Phe	Phe	Trp
1				5				10						15	
Asp	Lys	Ile	Trp	Pro	Ala	Asp	Glu	Ser	Glu	Glu	Asp	Ile	Pro	Arg	Ile
		20					25						30		
Gln	Gly	His	Asp	Asp	Asn	Pro	Val	Pro	Glu	Gln	Ala	Ala	Ala	Val	Glu
		35					40					45			
Pro	Cys	Ser	Phe	Pro	Ala	Pro	Arg	Ala	Arg	Leu	Phe	Arg	Ala	Leu	Tyr
	50					55					60				
Asp	Phe	Thr	Ala	Arg	Cys	Ala	Glu	Glu	Leu	Ser	Val	Ser	Gly	Gly	Asp
65					70					75					80
Arg	Leu	Tyr	Ala	Leu	Lys	Glu	Glu	Gly	Asp	Tyr	Ile	Phe	Ala	Gln	Arg
				85					90					95	
Leu	Ser	Gly	Pro	Pro	Ser	Thr	Gly	Leu	Val	Pro	Val	Thr	Tyr	Leu	Ala
			100					105					110		
Lys	Ala	Thr	Pro	Glu	Pro	Pro	Ser	Asp	Gln	Pro	Trp	Tyr	Phe	Ser	Gly
		115					120					125			
Ile	Ser	Arg	Ala	Gln	Ala	Gln	Gln	Leu	Leu	Leu	Ser	Pro	Ala	Asn	Ala
	130					135					140				
Pro	Gly	Ala	Phe	Leu	Ile	Arg	Pro	Ser	Glu	Ser	Ser	Ile	Gly	Gly	Tyr
145					150					155					160
Ser	Leu	Ser	Val	Arg	Ala	Gln	Ala	Lys	Val	Cys	His	Tyr	Arg	Ile	Cys
				165					170					175	
Met	Ala	Pro	Ser	Gly	Ser	Leu	Tyr	Leu	Gln	Glu	Gly	Gln	Leu	Phe	Pro
			180					185					190		
Ser	Leu	Asp	Ala	Leu	Leu	Ala	Tyr	Tyr	Lys	Thr	Asn	Trp	Lys	Leu	Ile
		195					200					205			
Gln	Asn	Pro	Leu	Leu	Gln	Pro	Cys	Ile	Pro	Gln	Ile	Pro	Leu	Val	Gln
	210					215					220				
Asp	Glu	Trp	Glu	Arg	Pro	Arg	Ser	Glu	Phe	Val	Phe	Gly	Arg	Lys	Leu
225					230					235					240
Gly	Glu	Gly	Phe	Phe	Gly	Glu	Val	Trp	Glu	Gly	Leu	Trp	Leu	Gly	Ser
			245						250					255	
Ile	Pro	Val	Ala	Val	Lys	Val	Ile	Lys	Ser	Ala	Asp	Met	Lys	Leu	Ala
			260					265					270		
Asp	Leu	Thr	Lys	Glu	Ile	Glu	Ala	Leu	Lys	Ser	Leu	Arg	His	Glu	Arg
		275					280					285			
Leu	Ile	Arg	Leu	His	Ala	Ile	Cys	Ser	Leu	Gly	Glu	Pro	Val	Tyr	Ile

290	295	300
Val Thr Glu Leu Met Gly Lys Gly Asn Leu Gln Val Tyr Leu Gly Ser 305 310 315 320		
Ser Glu Gly Lys Ala Leu Ser Leu Pro His Leu Leu Gly Phe Ala Cys 325 330 335		
Gln Val Ala Glu Gly Met Ser Tyr Leu Glu Glu Arg Arg Val Val His 340 345 350		
Arg Asp Leu Ala Ala Arg Asn Val Leu Val Gly Asp Asp Leu Thr Cys 355 360 365		
Lys Val Ala Asp Phe Gly Leu Ala Arg Leu Leu Lys Asp Asp Val Tyr 370 375 380		
Ser Pro Ser Ser Gly Ser Lys Ile Pro Val Lys Trp Thr Ala Pro Glu 385 390 395 400		
Ala Ala Asn Tyr Arg Val Phe Ser Gln Lys Ser Asp Val Trp Ser Phe 405 410 415		
Gly Ile Leu Leu Tyr Glu Val Phe Thr Tyr Gly Gln Cys Pro Tyr Glu 420 425 430		
Gly Met Thr Asn His Glu Thr Leu Gln Gln Ile Ser Arg Gly Tyr Arg 435 440 445		
Leu Pro Arg Pro Ala Val Cys Pro Ala Glu Val Tyr Val Leu Met Val 450 455 460		
Glu Cys Trp Lys Gly Ser Pro Glu Glu Arg Pro Thr Phe Ala Ile Leu 465 470 475 480		
Arg Glu Lys Leu Asn Ala Ile Asn Arg Arg Leu His Leu Gly Leu Thr 485 490 495		

<210> 124  
 <211> 496  
 <212> PRT  
 <213> Mus musculus

<400> 124  
 Met Glu Pro Phe Leu Arg Lys Arg Leu Thr Phe Leu Ser Phe Phe Trp  
 1 5 10 15  
 Asp Lys Ile Trp Pro Ala Asp Glu Ser Glu Glu Asp Ile Pro Arg Ile  
 20 25 30  
 Gln Gly His Asp Asp Asn Pro Val Pro Glu Gln Ala Ala Ala Val Glu  
 35 40 45

Pro Cys Ser Phe Pro Ala Pro Arg Ala Arg Leu Phe Arg Ala Leu Tyr  
 50 55 60  
 Asp Phe Thr Ala Arg Cys Ala Glu Glu Leu Ser Val Ser Arg Gly Asp  
 65 70 75 80  
 Arg Leu Tyr Ala Leu Lys Glu Glu Gly Asp Tyr Ile Phe Ala Gln Arg  
 85 90 95  
 Leu Ser Gly Pro Pro Ser Thr Gly Leu Val Pro Val Thr Tyr Leu Ala  
 100 105 110  
 Lys Ala Thr Pro Glu Pro Pro Ser Asp Gln Pro Trp Tyr Phe Ser Gly  
 115 120 125  
 Ile Ser Arg Ala Gln Ala Gln Gln Leu Leu Leu Ser Pro Ala Asn Ala  
 130 135 140  
 Pro Gly Ala Phe Leu Ile Arg Pro Ser Glu Ser Ser Ile Gly Gly Tyr  
 145 150 155 160  
 Ser Leu Ser Val Arg Ala Gln Ala Lys Val Cys His Tyr Arg Ile Cys  
 165 170 175  
 Met Ala Pro Ser Gly Ser Leu Tyr Leu Gln Glu Gly Gln Leu Phe Pro  
 180 185 190  
 Ser Leu Asp Ala Leu Leu Ala Tyr Tyr Lys Thr Asn Trp Lys Leu Ile  
 195 200 205  
 Gln Asn Pro Leu Leu Gln Pro Cys Ile Pro Gln Ile Pro Leu Val Gln  
 210 215 220  
 Asp Glu Trp Glu Arg Pro Arg Ser Glu Phe Val Leu Arg Lys Lys Leu  
 225 230 235 240  
 Gly Glu Gly Phe Phe Gly Glu Val Trp Glu Gly Leu Trp Leu Gly Ser  
 245 250 255  
 Ile Pro Val Ala Val Lys Val Ile Lys Ser Ala Asp Met Lys Leu Ala  
 260 265 270  
 Asp Leu Thr Lys Glu Asn Glu Ala Leu Lys Ser Leu Arg His Glu Arg  
 275 280 285  
 Leu Ile Arg Leu His Ala Ile Cys Ser Leu Gly Glu Pro Val Tyr Ile  
 290 295 300  
 Val Thr Glu Leu Met Gly Lys Gly Asn Leu Gln Val Tyr Leu Gly Ser  
 305 310 315 320  
 Ser Glu Gly Lys Ala Leu Ser Leu Pro His Leu Leu Gly Phe Ala Cys  
 325 330 335  
 Gln Val Ala Glu Gly Met Ser Tyr Leu Glu Glu Arg Arg Val Val His  
 340 345 350

Arg Asp Leu Ala Ala Arg Asn Val Leu Val Gly Asp Asp Leu Thr Cys  
           355                                  360                                  365  
 Lys Val Ala Asp Phe Gly Leu Ala Arg Leu Leu Lys Asp Asp Val Tyr  
           370                                  375                                  380  
 Ser Pro Ser Ser Gly Ser Lys Ile Pro Val Lys Trp Thr Ala Pro Glu  
   385                                  390                                  395                                  400  
 Ala Ala Asn Tyr Arg Val Phe Ser Gln Lys Ser Asp Val Trp Ser Phe  
                                   405                                  410                                  415  
 Gly Ile Leu Leu Tyr Glu Val Phe Thr Tyr Gly Gln Cys Pro Tyr Glu  
                                   420                                  425                                  430  
 Gly Met Thr Asn His Glu Thr Leu Gln Gln Ile Ser Arg Gly Tyr Arg  
                                   435                                  440                                  445  
 Leu Pro Arg Pro Ala Val Cys Pro Ala Glu Val Tyr Val Leu Met Val  
           450                                  455                                  460  
 Glu Cys Trp Lys Gly Ser Pro Glu Glu Arg Pro Thr Phe Ala Ile Leu  
   465                                  470                                  475                                  480  
 Arg Glu Lys Leu Asn Ala Ile Asn Arg Arg Leu His Leu Gly Leu Thr  
                                   485                                  490                                  495

<210> 125  
 <211> 451  
 <212> PRT  
 <213> Homo sapiens

<400> 125  
 Met Val Ser Arg Asp Gln Ala His Leu Gly Pro Lys Tyr Val Gly Leu  
   1                                  5                                  10                                  15  
 Trp Asp Phe Lys Ser Arg Thr Asp Glu Glu Leu Ser Phe Arg Ala Gly  
                                   20                                  25                                  30  
 Asp Val Phe His Val Ala Arg Lys Glu Glu Gln Trp Trp Trp Ala Thr  
                                   35                                  40                                  45  
 Leu Leu Asp Glu Ala Gly Gly Ala Val Ala Gln Gly Tyr Val Pro His  
   50                                  55                                  60  
 Asn Tyr Leu Ala Glu Arg Glu Thr Val Glu Ser Glu Pro Trp Phe Phe  
   65                                  70                                  75                                  80  
 Gly Cys Ile Ser Arg Ser Glu Ala Val Arg Arg Leu Gln Ala Glu Gly  
                                   85                                  90                                  95  
 Asn Ala Thr Gly Ala Phe Leu Ile Arg Val Ser Glu Lys Pro Ser Ala  
                                   100                                  105                                  110

Asp Tyr Val Leu Ser Val Arg Asp Thr Gln Ala Val Arg His Tyr Lys  
 115 120 125  
 Ile Trp Arg Arg Ala Gly Gly Arg Leu His Leu Asn Glu Ala Val Ser  
 130 135 140  
 Phe Leu Ser Leu Pro Glu Leu Val Asn Tyr His Arg Ala Gln Ser Leu  
 145 150 155 160  
 Ser His Gly Leu Arg Leu Ala Ala Pro Cys Arg Lys His Glu Pro Glu  
 165 170 175  
 Pro Leu Pro His Trp Asp Asp Trp Glu Arg Pro Arg Glu Glu Phe Thr  
 180 185 190  
 Leu Cys Arg Lys Leu Gly Ser Gly Tyr Phe Gly Glu Val Phe Glu Gly  
 195 200 205  
 Leu Trp Lys Asp Arg Val Gln Val Ala Ile Lys Val Ile Ser Arg Asp  
 210 215 220  
 Asn Leu Leu His Gln Gln Met Leu Gln Ser Glu Ile Gln Ala Met Lys  
 225 230 235 240  
 Lys Leu Arg His Lys His Ile Leu Ala Leu Tyr Ala Val Val Ser Val  
 245 250 255  
 Gly Asp Pro Val Tyr Ile Ile Thr Glu Leu Met Ala Lys Gly Ser Leu  
 260 265 270  
 Leu Glu Leu Leu Arg Asp Ser Asp Glu Lys Val Leu Pro Val Ser Glu  
 275 280 285  
 Leu Leu Asp Ile Ala Trp Gln Val Ala Glu Gly Met Cys Tyr Leu Glu  
 290 295 300  
 Ser Gln Asn Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val  
 305 310 315 320  
 Gly Glu Asn Thr Leu Cys Lys Val Gly Asp Phe Gly Leu Ala Arg Leu  
 325 330 335  
 Ile Lys Glu Asp Val Tyr Leu Ser His Asp His Asn Ile Pro Tyr Lys  
 340 345 350  
 Trp Thr Ala Pro Glu Ala Leu Ser Arg Gly His Tyr Ser Thr Lys Ser  
 355 360 365  
 Asp Val Trp Ser Phe Gly Ile Leu Leu His Glu Met Phe Ser Arg Gly  
 370 375 380  
 Gln Val Pro Tyr Pro Gly Met Ser Asn His Glu Ala Phe Leu Arg Val  
 385 390 395 400  
 Asp Ala Gly Tyr Arg Met Pro Cys Pro Leu Glu Cys Pro Pro Ser Val  
 405 410 415

His Lys Leu Met Leu Thr Cys Trp Cys Arg Asp Pro Glu Gln Arg Pro  
 420 425 430

Cys Phe Lys Ala Leu Arg Glu Arg Leu Ser Ser Phe Thr Ser Tyr Glu  
 435 440 445

Asn Pro Thr  
 450

<210> 126

<211> 174

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus  
 sequence

<400> 126

Gly Gln Asp Leu Leu Gln Val Phe Asp Leu Pro Glu Ser Ser Phe Ser  
 1 5 10 15

Val Arg Lys Gly Val Gly Leu His Gly Ser Ser Pro Ala Tyr Arg Phe  
 20 25 30

Gly Lys Pro Ala Val Val Ser Gln Pro Thr Arg Thr Leu Phe Pro Ser  
 35 40 45

Gly Leu Pro Glu Asp Phe Ser Leu Leu Thr Thr Phe Arg Gln Ala Pro  
 50 55 60

Lys Ser Arg Gly Val Leu Phe Ala Ile Tyr Asp Ala Gln Asn Val Arg  
 65 70 75 80

Gln Leu Gly Leu Glu Val Asn Gly Arg Ala Asn Thr Leu Leu Leu Arg  
 85 90 95

Tyr Gln Gly Val Asp Gly Lys Gln His Thr Val Ser Phe Arg Asn Leu  
 100 105 110

Pro Leu Ala Asp Gly Gln Trp His Lys Leu Ala Leu Ser Val Ser Gly  
 115 120 125

Glu Ser Ala Thr Leu Tyr Val Asp Cys Asn Glu Ile Asp Ser Arg Pro  
 130 135 140

Leu Asp Arg Pro Phe Pro Pro Ile Asp Thr Asp Gly Ile Glu Val Arg  
 145 150 155 160

Gly Ala Gln Ala Ala Asp Glu Lys Lys Phe Gln Gly Asp Leu  
 165 170

<210> 127

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide  
primer

<400> 127

gtgaaagggt gctatgcaaa

20